A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-MODELING ON SOCIAL SKILLS AMONG CHILDREN WITH AUTISM IN SELECTED SCHOOLS, COIMBATORE.

By

Reg. No: 301515901

A Dissertation submitted to The Tamil Nadu Dr. M.G.R Medical University, Chennai, in partial fulfillment of requirement for the Degree of

MASTER OF SCIENCE IN NURSING

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INTERNAL EXAMINER **EXTERNAL EXAMINER**

CERTIFICATE

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His faithful love endures forever!"

Jeremiah 33:11

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CHAPTER-I

INTRODUCTION

"If they can't learn the way we teach,
We teach the way they learn -AUTISM"
- Dr. O IVAR LOVAAS

Children are in a dynamic process of growth and development. In India about 35% of total populations are children below 15 years. Children are vital to the nation's present and its future. Good health of these precious members of the society should be ensured as prime importance in all countries. Children are recognized not only for who they are today, but for their future roles. The health during childhood sets a stage for the adult health; it reinforces their perspective and creates an important ethical, social and economic environment. Healthy children are more likely to become healthy adult.

Now-a-days ailments of children are increasing rapidly, in which developmental disorders is in high incidence. Autism is one of the most common developmental disorder and it is described as a heterogeneous group of conditions, which significantly limit one's ability to participate in daily activities. These children have significant functional limitations in language, mobility, learning, self-help and independent living.

Autism is a neuro-developmental disorder characterized by triad of symptoms as impaired social interaction, verbal and non-verbal communication, and restricted and repetitive behaviour. It is one of the five pervasive developmental disorders that first appears during infancy or childhood, and generally follows a steady course without remission. Children with autism show significant difficulty in building social relationships and inability to understand the social communication **(Marilyn David Wilson, 2012**).

Many children with autism resist and reject human contact and social interactions from early childhood. They show deficits in lack of orientation towards social stimulus, lack of eye contact and problems with social interaction. These children have difficulty in interpreting verbal or non-verbal social cues and in

displaying appropriate emotional responses. Children with autism lack in the ability to learn from their life experiences, or pick up social skills and cues from peers, siblings and adults and thus have more difficulty with social skills. These children need to learn critical life skills which are essential to live with others. Some activities are taught to these children to interact socially **(Bellini, Akullian, 2007)**.

Social skills are defined as "Socially acceptable learned behaviors that enable a person to interact with others in ways that elicit positive responses" **(Elliott, Racine and Busse)**. A deficiency in social functioning is one of the defining features of autism. Although many children with autism may wish to interact with others, they often do not have the necessary skills to effectively carry out social exchanges. Social skills are taught in a systematic manner using specific teaching method. Early speech or behavior interventions can help children with autism to gain self care, social and communication skills **(Wilson, 2012).**

According to **Autism Centre of Excellence, Gurgoan** stated that **Applied Behaviour Analysis (ABA)** is very effective intervention to improve the autistic child in social, communication, self-help, academic and in occupation. This Applied Behaviour Analysis includes sensory integration, PECS, adaptive materials, activity schedules, social stories and video-modeling. Video-modeling is an effective intervention in applied behavior analysis programs. This method helps the autistic children to have attention and retain the information for longer duration. So it is also an effective way to teach older children **(Kasbar and Dunn)**.

Video-modeling is a method of instruction to provide a visual model of the targeted behavior or skill. The model is shown to the learner who will perform the target behavior, either in a moment or at a later point in time. Types of video-modeling include basic video modeling, video self-modeling, point-of-view video-modeling, and video prompting. Basic video-modeling is most commonly used, which enables the learner to engage in the target behavior or skill.

Video-modeling has been an effective teaching strategy in facilitating generalization of social skills among children with autism. Video-modeling is a visual teaching method that occurs by watching a video of someone modeling a targeted behavior or skill and then imitating the behavior or skill which is watched. Video modeling teaches multiple skills simultaneously. Modeling is a behavior or skill that

is done within the context of a real situation. This method of teaching will motivate to acquire multiple skills to the child **(Bellini, Scott, 2006).**

NEED FOR THE STUDY

Autism is the world's third most common developmental disorder (National Autistic Society). Most of the studies conducted since the year 2000 in different geographical regions of the world show an estimated prevalence rate of 17/10,000 for autistic disorder and 62/10,000 for all pervasive developmental disorders.

According to statistics by the **CENTRE FOR DISEASE CONTROL AND PREVENTION (CDC**) **New York**, one in every 88 children today is born with autism spectrum disorder. In 2010 the number of people affected with autism was estimated to be about 1–2 per 1000 worldwide. It occurs four to five times more often in boys than girls **(Autism Society of America).**

Globally in 2013, autism was estimated to affect 21.7 million children. About 1.5% of children in the United States (one in 68) are diagnosed with Autism spectrum disease (ASD) in 2014 and 30% increase from 1 in 88 in 2012 and United Kingdom was1in 100. **Michael Rasanoff, Director of public health-US**, says 1 in 45 children is the autism prevalence given by National Health Survey-2015. In March 2016, 43% of children were identified as autism (**Centre for Disease Control and Prevention).**

A descriptive study was conducted for 156 children among which there were 81 with childhood autism and 75 with ASD. The result shows 55% had an intellectual disability (IQ<70), 16% had moderate to severe intellectual disability (IQ<50), 28% had average intelligence (IQ>85) and only 3% were of above average IQ. The study reveals that, ASD was less strongly associated with intellectual disability and there was only limited evidence of a distinctive IQ profile. Adaptive outcome was significantly impaired even for those children of average intelligence **(Charman, Pickles, 2011).**

In 2014, US study found 50% children are with average and above average IQ. **Rommelse** and her team tested various cognitive abilities in 128 children with autism and 146 controls, between 6 and 21 years of age. Across both groups, 52 children

have below-average IQ. In the remaining 222 children, half have average IQ and the other half have above-average IQ. The emotional quotient is insignificant among children with autism but have good physical health.

India is a home to about 10 million people with autism and other disabilities, there has been an increase in the number over the last few years. The survey was conducted on 4,000 households in Andhra Pradesh, Odisha, Himachal Pradesh, Haryana and Goa in collaboration with AIMS, Thiruvananthapuram Medical College and universities of Stanford and Pennsylvania, US. Result shows 1-1.5% autistic children are between the age group two to nine and the estimated rate for autism in India is 1 in 500 and 1 in 150 **(N K. Arora, International Clinical Epidemiology Network Trust - INCLEN).**

A cross-sectional two-phase study was conducted to estimate the prevalence of autism spectrum disorders (ASDs) in the selected areas (tribal, rural, and urban) of a northern state of India, Himachal Pradesh. Screening of all the children in the age group of 1-10 years with the help of an indigenous assessment tool for autism was done. A result shows that 6 out of the 10 (60%) autistic cases belong to the "lower middle class" in India **(India. J Post grad Med 2015).**

In a meta-analysis of 23 studies published between 1987 and 2005 concluded that video modeling is an effective intervention strategy for addressing skills important to self-determination for students with ASD, including behavioral functioning, social-communication skills and functional skills. According to Bandura's theory of modeling, students performed best when they were highly motivated and attentive because they enjoyed watching the videos **(Bellini, Akullian, 2007).**

Children with autism have impaired social skills which affect oneself and the family, where they are unable to understand and recognize others emotions and feelings. So the researcher felt that there is a need to promote social skills, so video-modeling can be used as an effective means to promote social skills of children with autism.

STATEMENT OF THE PROBLEM

A Study To Assess The Effectiveness Of Video-Modeling On Social Skills Among Children With Autism In Selected Schools, Coimbatore.

OBJECTIVES

- To assess the level of social skills among children with autism in experimental and control group.
- To assess the effectiveness of video-modeling on social skills among children with autism in experimental group.
- To compare the social skills among children with autism between experimental and control group after video-modeling.
- To associate the findings with selected demographic variables.

OPERATIONAL DEFINITIONS

- **Effectiveness**:

  It refers to the desired effect of video- modeling in improving the level of social skills among school age children with autism.

- **Social skills:**

  It refers to the ability of children to initiate, interact and exchange information with one another.

- **Video-modeling**

  It refers to a video on social skills systematically organized, developed with audio effects and played by using speakers for the children diagnosed as autism with impaired social skills.

- **Children with Autism**:

  It refers to the children diagnosed to have autism between 6 and 12 yrs of age.

ASSUMPTIONS

- Most of the children with autism have impaired social skills.
- Video-modeling will promote social skills among children with autism.

HYPOTHESIS

Children with autism who receive video-modeling will show a significant improvement in social skills among experimental group than control group.

DELIMITATIONS

The study is limited to :

- Children who are regular at school.
- Children between 6 and 12 years of age.
- Children who are diagnosed as autism without any other disabilities.

PROJECTED OUTCOMES

- The findings of the study will help to identify the effectiveness of video-modeling in improving social skills among children with autism.
- The study will initiate health professionals to conduct further research in this study.

CONCEPTUAL FRAME WORK

Theories, models and frameworks are the primary mechanisms by which researchers organize findings into a boarder conceptual context. The theory is a set of concepts and proposition that provide in orderly way to view a phenomenon **(Suresh K Sharma, 2014).** Model is a symbolic representation of some phenomenon. Conceptual framework as a written or visual or symbolic representation of a phenomenon to express abstract ideas in a more understandable or precise form **(Polit and Beck, 2009).**

The conceptual framework used in this study is Modified Imogene King's goal attainment theory (1981). It is based on the personal, interpersonal system including perception, judgment, action, reaction, interaction and transaction.

According to this theory it deals with relationship to which each individual brings perception of self, role and personal levels of growth and development. Individuals makes judgement of perception, takes action and react to the judgement by communicate for interaction and then in transaction to attain mutually set goals, the relationship takes place is identified by their behaviors.

The present study aims at developing and evaluating the effectiveness of video modeling on social skills among children with autism.

The researcher adopted Imogene King's goal attainment theory is a basis for conceptual framework which is aimed to provide video-modeling to children with autism. It also helps to find out the effectiveness of video-modeling by using modified autism social skills profile among children with autism. This involves the interaction among individual, groups and society.

PERCEPTION

Perception is primary feature of a personal system. It is a process of organizing, interpreting and transforming information from sense data and memory. It is each individual representation of reality.

Here the researcher's perception is children with autism have impaired social skills. Children feel less involvement in group activities due to impaired social skills.

JUDGEMENT

Judgement refers to the decision making to attain a goal.

Here the researcher judges that the video-modeling will improve social skills among children with autism. Children with autism judge that participation in group activities will improve their social skills.

ACTION

Action refers to sequence of behaviours involving mental or physical action seeking to achieve goal.

The researcher's action is to obtain data regarding demographic variables and to assess the social skills among children with autism by using Modified autism social skills profile. Children's action is to undergo assessment.

REACTION

The reaction refers to information help individual to attain the goal.

The researcher and the children with autism set mutual goals in improving social skills through communication and active participation in group activities and in turn taking.

INTERACTION

According to Imogene king, interaction is a process of perception and communication between individual and environment represented by verbal and nonverbal behaviors that are goal oriented. Individual come together for a purpose, each makes judgement, takes mental or physical action and react to situation.

Here the researcher is providing video-modeling to the children with autism in Communication, Involving in group activity and play and Turn taking, whereas the control group undergone regular classroom teaching and activities.

TRANSACTION

It refers to the attainment of goal. The researcher reassesses the social skills among children with autism by using modified autism social skills profile. The researcher evaluates the effectiveness of video-modeling and analyze whether the video-modeling improves the social skills among children with autism.

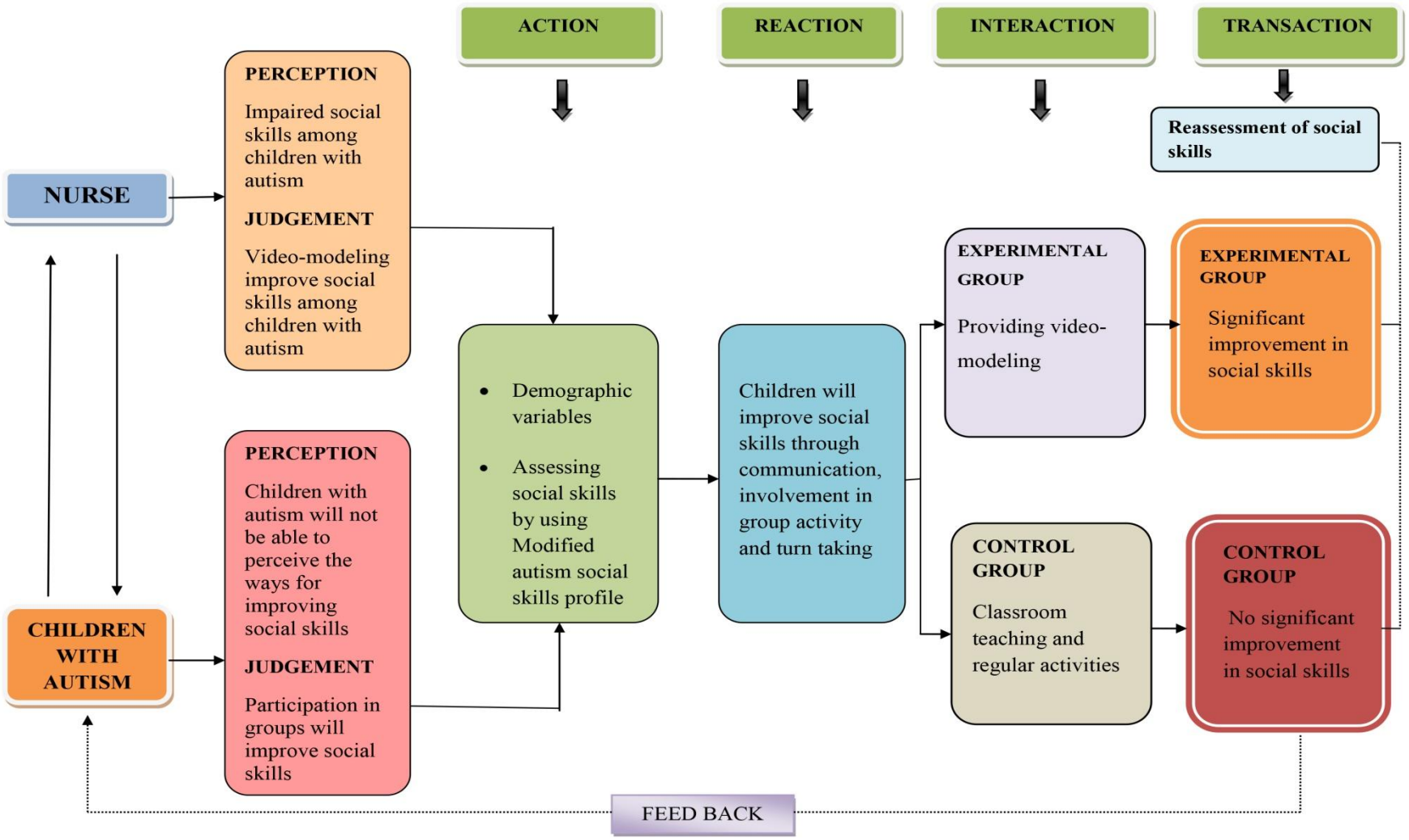

Figure 1: MODIFIED IMOGENE KING'S GOAL ATTAINMENT THEORY, 1981

CHAPTER – II

REVIEW OF LITERATURE

A review of literature is a description and analysis of the literature relevant to a topic or field. Review of literature is one of the most important steps in the research process. A literature review is an account of the previous efforts and achievements of scholars and researchers on a phenomenon.

Literature review may be defined as selection of available documents, both published and unpublished on the topic of research interest, which contain information, ideas, data and evidence written from a particular stand point to fulfill certain views on the nature of the topic. Literature review is broad, comprehensive, in depth, systematic and critical review of scholarly publication, unpublished printed or audio visual materials and personal communications **(Suresh K Sharma, 2014).**

The review of literature for the present study was collected from various information given in abstracts, books, journals, published and unpublished dissertations, prevalence and websites. For a better understanding the review of literature has been organized as follows:

SECTION A: Theoretical overview regarding autism

SECTION B: Studies related to autism

SECTION C: Studies related to effectiveness of video-modeling on social skills among children with autism.

SECTION A: Theoretical overview regarding Autism

Development disabilities have been described as a heterogeneous group of conditions that significantly limit one's ability to participate in daily activities. Individuals who are considered to have developmental disabilities have significant functional limitations in three or more of the following areas: language, mobility, learning, self-help and independent living. Autism is a developmental disorder that involves impairment in social interaction and communication development, as well as patterns of repetitive behaviours and restricted interest **(Zriqat, Amam, 2009).**

Autism is characterized by deficits in social interaction, communication and repetitive behaviour. Cognitive abilities in people with autism vary between those with average to above average intelligence. Social issues can negatively affect a child's learning and self-esteem, making it difficult for them to establish positive relationships. Thus social skills are taught at an early age. Children who do not successfully develop social skills are at risk for having social and emotional issues later in life.

The teaching methods incorporate basic behavioural principles such as positive reinforcement, prompting, shaping, chaining, fading or modeling. Modeling can be defined as a procedure where by a sample of a given behavior is presented to an individual and then the behavior of that individual is assessed to determine if they engage in a similar behavior. Modeling can exerts stimulus over the observer and initiate the observer for the imitation of the modeled behaviour.

Video-modeling has recently expanded into the realm of social development of children with autism. Video-modeling has been defined as the occurrence of a behavior by an observer that is similar to the behavior shown by a model on a videotape. Video-modeling is particularly effective in Applied Behavior Analysis (ABA) programs in teaching behaviors to children with autism **(Nikopoulos, Keenan, 2006).**

Video technology promotes positive behaviour that supports the children with autism. Video-modeling is cost efficient and effective than in-vivo (live) modeling. The important benefits of video-modeling includes the increased ability to gain and hold student attention, less time required for training and implementation and complete control over the observed stimuli. Thus suggest video-modeling is effective for children with autism **(Graetz, Mastropieri and Scruggs)**.

SECTION B: Studies related to Autism

An epidemiology study was conducted in the semi urban community in Kerala, South India. The study was conducted to determine the prevalence of autism and nature of the problem, to assess the social and emotional burden in the society. The report reveals that 23.3 per 10,000 populations in the age group of 1-30 years.

Thus results suggest that there is increased prevalence rate of autism in India **(Anitha, Poovathinal, 2016).**

A descriptive study was conducted to determine association of folic acid intake and prevalence of autism. The study was conducted among mothers who had taken folic acid during prenatal period. The 270 children age group of 6 years was selected. The results shows 0.6 (95%); CI is 0.4-0.9 as compared to nonusers of folic acid. It concludes that there is an association between prevalence of lower risk of ASD and the intake of folic acid during prenatal period **(Suren, 2013).**

An experimental study was conducted to determine the effectiveness of social skills groups for improving social competence, social communication and quality of life for child with autism spectrum disease between ages 6-21 years in Campbell collaboration, USA. By using randomized control trials, 196 participants with autism spectrum disease children assigned as control and experimental group. The intervention was given to six participants in the experimental group. The group meets once per week for 12 weeks, with each session lasting for about 60 to 90 minutes. Social skills were assessed by using social competence, friendship quality, emotional recognition and quality of life. The result shows that the standard mean difference Z=2.99 (P=0.04) for social competence, Z=2.05 for friendship and quality of life and Z=1.25 for the recognition of emotion. The study concluded that, the individuals received intervention showed improved social competence and better friendship when compared with those not received the intervention **(Reichow, Brain, 2012).**

A survey was conducted to investigate the effectiveness and generalization of social skill interventions for children with autism spectrum disease among the social psychologists from National Association of School Psychologists (NASP) in Utah University, Logan. The goal of the current survey was to gain perspectives on the effectiveness, generalization, and needed training from school psychologists who implement and organize social skills interventions for students with ASD. About 221 samples were selected as responded for social intervention. Results from this survey indicate about 78% percent participated in giving indirect interventions to students with ASD and about 12% gave direct interventions. Thus study concludes there is high response for the social interventions for child with autism spectrum disease. It

helps school psychologists to train more appropriately for the use of effective social skills interventions for students with ASD **(Amanda S. Day, 2011).**

A survey was conducted among Somalian and Non-Somalian children to determine the prevalence rate of ASD. The survey was led by the University of Minnesota and they selected the children of age group of 7 to 9 years. The results shows 1 in 32 Somalian children were diagnosed to have autism spectrum disease than the Non-Somalian children. Thus results suggest that there is more prevalence of ASD in Somalian children **(Lasoo Xarir, 2010).**

A survey was conducted to determine prevalence of autism in Cambridge, UK. The parents of children of age group 5 to 9 years were selected. The questionnaire with behavioural concern of 31 questions was given to 11,635 parents of the children. The 3342 questionnaire were collected, the results showed that prevalence of childhood autism is 11 per 10,000 and the prevalence of autism spectrum disease is 94 per 10,000 or 1 in 106. Thus study conclude that there is increase prevalence rate of autism **(Simon Baron, 2009)**

A comparative study was conducted between age and IQ level of children with autism in Applied Behaviour Analysis program of 3 to 6 years of age. The 27 children were selected who were in intensive treatment program, Douglass Development disability centre, US. IQ was tested by using Stanford Binet Intellectual scale. The results show that higher IQ at of younger age and lower IQ with older age. Thus study concluded that early intervention is needed for children with autistic disorder **(Harris S L, 2008).**

SECTION C: Studies related to effectiveness of Video-modeling on social skills among children with Autism.

An experimental study was conducted to determine the procedures and compliance of a video-modeling applied behaviour analysis intervention for Brazilian parents of children with autism spectrum disease. Sixty seven parents participated, among than 34 was taken as experimental and 33 as controls. The parental training intervention given for 22 weeks for parents of child between age group of 3 to 6 years with IQ lower than 70. Result shows good 32.4%, reasonable 38.2%, low 5.9% and 23.5% with no compliance. Thus study concludes video-modeling parental training

seems a promising feasible and low-cost way to deliver care for children with autism spectrum disorder **(Bagaiolo, Mari, 2017).**

An experimental study was conducted to determine the effectiveness of superheroes social skill program among children with age group of 6-12years. A total of four groups recruited from three public schools in 2015, southeastern united states. Each group has a child with autism spectrum disorders along with other peers. The pretest social skills of children were assessed by using Autism Social Skills Profile (ASSP). The Video-modeling intervention was planned for four social skills from superheroes social skills program, namely joining in activity, nonverbal communications, turn taking, and conversation / topic maintenance. The social skills training sessions was given for duration of 30 minutes, each social skill for 3minutes in duration occurred once weekly for 7-11 weeks and post test social skills were assessed by using same ASSP. The result showed a score of Child intervention rating profile (CIRP) = 5.63 (normal range is 5-6), so the researcher concluded that superheroes social skills program can be used in school settings which increases social engagement of child with autism spectrum disease **(Keith C Radley, 2015).**

An experimental study conducted to assess the effectiveness of video modeling for teaching imitation to young children with autism, Florida. Eight children were selected with age group of 24 to 62 months. Autism diagnostic observation schedule is used. The participants were exposed to video modeling (VM) and live modeling (LM) sessions. Three VM sessions and three LM sessions were conducted twice a day. Results suggest those 6 out of 8 children were successful with VM procedures and two children successful with LM procedures. Thus study suggests that video-modeling were effective in teaching imitation to young children with autism **(Logan. S. MC. Dowell, 2015).**

A study to investigate combined effects of computer-presented social stories and video models on social communication for 3 children with high functional autism, Oregon. Using a multiple-baseline across-participants design was adopted, computer-presented Social Stories and video models were implemented. Direct observations of the participants of target behaviors were collected two times per week during unstructured school activities. The children underwent the both computer presented social stories and video models simultaneously. The results showed that combined

intervention was effective by 100% (all 3 children) in improving the rate of social communication of the children with autism after two weeks of follow up. Thus study concludes that it is the beneficial method to improve social communication of children with high functional autism **(Frank A Sansosti, 2015).**

A Meta-analysis study was done to determine the effectiveness of video modeling interventions on the social and communication skills of children with autism spectrum disorders. About 26 studies were randomly selected with 59 samples, the mean Improvement Rate Difference (IRD) was 0.53 and SD was 0.34 (range was -0.22 to 1). Result suggests that video-modeling interventions have the 53% improvement rate in the social and communication skills for children with autism spectrum disorders. Thus the study concludes that video-modeling is effective in improving social and communication in children with autism spectrum disorders **(Cathy Huaqing. Day, 2012)**.

A comparative study was conducted to determine effectiveness of peer video modeling and self video modeling to teach textual responses in children with autism in Florida. Two video tapes were created for each child; one is self-video and a peer-video. The intervention was given for the children initially by parents at home for three times a day for two days then the therapist conducted each session for two days. After watching videos for four days, video was shown immediately and the response of child was assessed. After 13 sessions, 19 sessions and 30 sessions child showed 100% response in self modeling and 80% response in peer modeling. Hence the results indicate, children with autism suggest that self video modeling is effective than peer video modeling for teaching textual responses **(Alonna Marcus, 2009).**

An experimental study was conducted to determine the effectiveness of using video modeling to teach reciprocal pretend play to children with autism, New England. Two children with autism were selected with age of 5 to 7 years of age and paired with two developing peers. Scripted play scenarios were videotaped. Three plays were used to evaluate the effectiveness of video modeling. One session per day was conducted. The results indicated both children with autism and developing peers were acquired quickly play actions and maintained this performance during follow up. Thus study concluded that video-modeling is effective strategy for children to engage in reciprocal interactions with developing peers **(Rebecca Mac Donald, 2009).**

A Meta analysis study was done to determine the effectiveness of video modeling in teaching complex social skills to children with autism, Brunel University. All experimental study selected child between the age of 7-15 years. The videotaped of reciprocal play was played for 35 sec duration. Results revealed that 3 or 4 video modeling sessions proved adequate to promote the stimuli. The post intervention was done after one month. Thus the studies suggest that video-modeling was a successful intervention in teaching a child with autism **(Christos K Nikopoulos, 2008).**

A comparative study was conducted to determine effectiveness of video modeling and in-vivo modeling for teaching developing skills for children with autism, California. Five children were selected with age group of 7-11 yrs. Each child was presented with two tasks, one as video modeling and other was in-vivo modeling. Video modeling is a video tape of model performing the target behaviour, where as in-vivo modeling children were observing live models performing the target behaviour. After observation children are tested for acquisition and generalization of target behaviour. Results suggest that video modeling led to faster acquisition of task and in promoting generalization than in-vivo modeling. Thus the study concluded that video-modeling is effective in promoting, motivating and maintaining developing skills for children with autism **(Charlop Christy, 2007).**

CHAPTER III

RESEARCH METHODOLOGY

INTRODUCTION

Research Methodology is the master plan specifying the methods and procedures for collecting and analyzing the needed information in a research study **(Suresh K Sharma, 2014).**

In this section, the following topics are discussed in relation to the methodology adopted by the investigator. It includes research approach, research design, setting of the study, variables, population, sample size, sampling technique, criteria for sample selection, description of the tool, content validity, reliability, pilot study, method of data collection and plan for data analysis.

RESEARCH APPROACH

In this study the researcher had adopted Quantitative research design.

RESEARCH DESIGN

The research design is a blue print to conduct a research study, it is a researcher's overall plan for answering the research questions or testing the research hypothesis **(Suresh K Sharma, 2014).**

The Pretest posttest control group design was adopted to achieve the objectives of the study. The investigator assigned the participants into two groups as experimental and control group. Video-modeling was given to the experimental group and the control group received regular classroom teaching. The effectiveness of a video-modeling on social skills was assessed by using Modified autism social skills profile among children with autism.

Pretest posttest control group design was adopted in this study

E : O_1 X O_2 X O_3

R

C : O_1 - O_2 - O_3

E : Experimental group

C : Control group

O_1 : Pretest level of social skills among children with autism

X : Video-modeling

O_2 : Post test-I level of social skills among children with autism

O_3 : Post test-II level of social skills among children with autism

R : Randomization

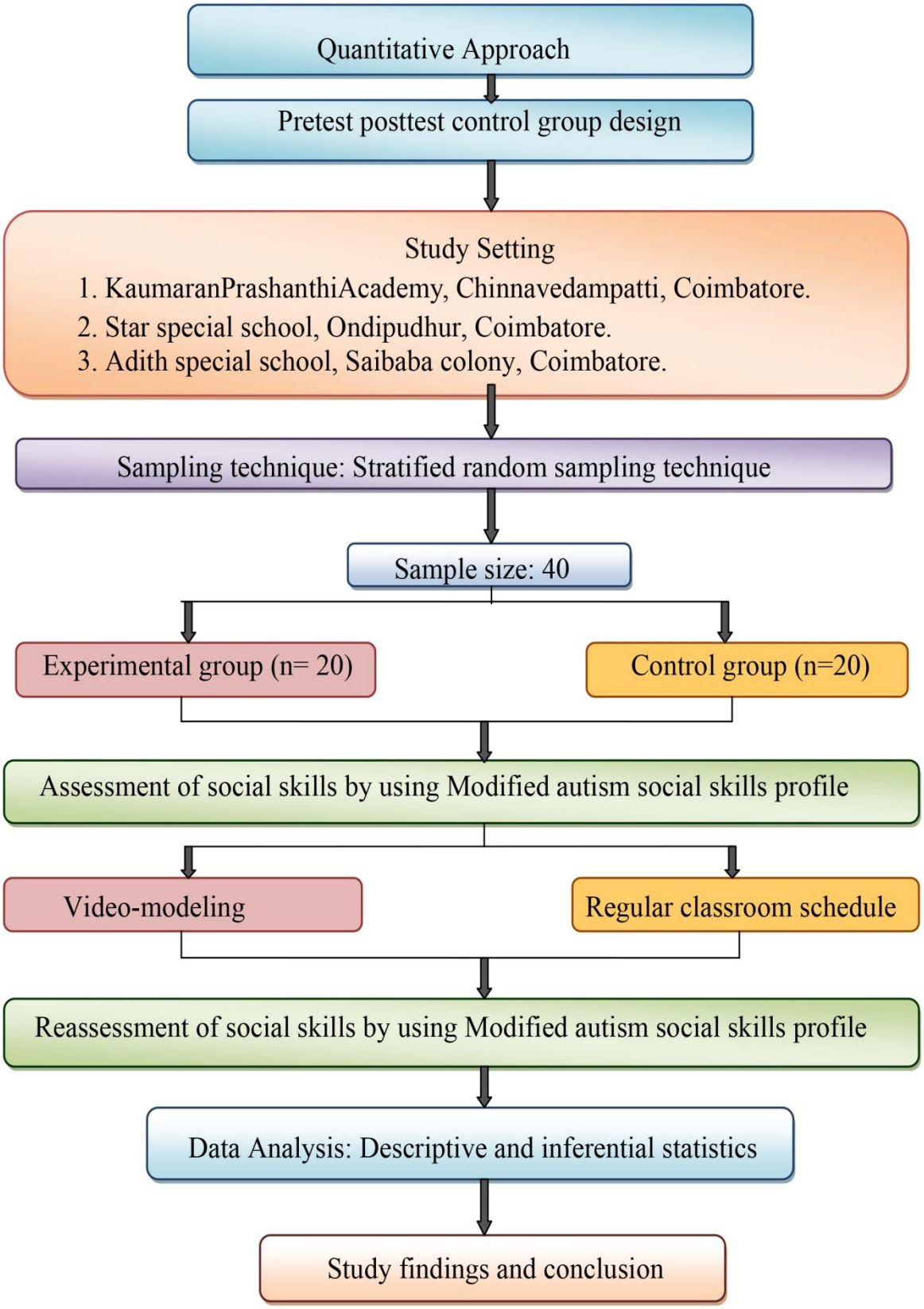

Figure 2: Schematic representation of study design

SETTING OF THE STUDY

The setting of the study is the physical location and condition in which data collection takes place **(Polit & Beck, 2009).**

The study was conducted in three schools, the schools are located 15 kms from K G hospital, Coimbatore. The following three schools were selected for the study. One among them is Kaumaran Prashanthi Academy, Chinnavedampatti, it is functioning with qualified teachers who have completed special education and has sophisticated infra-structure with well equipped classrooms, PECS, computer room and play ground. The school also facilitates occupational therapy, yoga and physical training. Next is Star special school, Ondipudhur, a Government aided residential school which functions under St.Joseph Christian mission. They have qualified teachers, well equipped classrooms and play ground. Occupational therapy is given to the children. Adith special school which is in Saibaba colony, functions as an additional education and training centre for children after their regular special school. They have trained teachers and well equipped occupational therapy and the therapists available for the children.

VARIABLES

Variables are qualities, properties, or characteristics of person, things, or situation that change or vary **(Suresh K Sharma, 2014).**

Independent variable

It is a stimulus or activity that is manipulated or varied by the researcher to create the effect on the dependent variable **(Suresh K Sharma, 2014)**.

Independent variable: Video-modeling regarding social skills

Dependent variable

It is the outcome or response due to the effect of independent variable, which researcher wants to predict **(Suresh K Sharma, 2014)**.

Dependent variable: Social skills among children with autism

Influencing variables

Influencing variables are the variables that may have the impact on the relationship between the dependent and Independent variables.

The influencing variables in this study are age of the child, birth order of the child, age of admission in school, type of family and residential area.

Confounding variable

It is a specific type of extraneous variable. It can influence the outcome of the study that is not controlled by the investigator **(Rajesh Kumar, 2016).**

Confounding variable – regular schedule followed in the school.

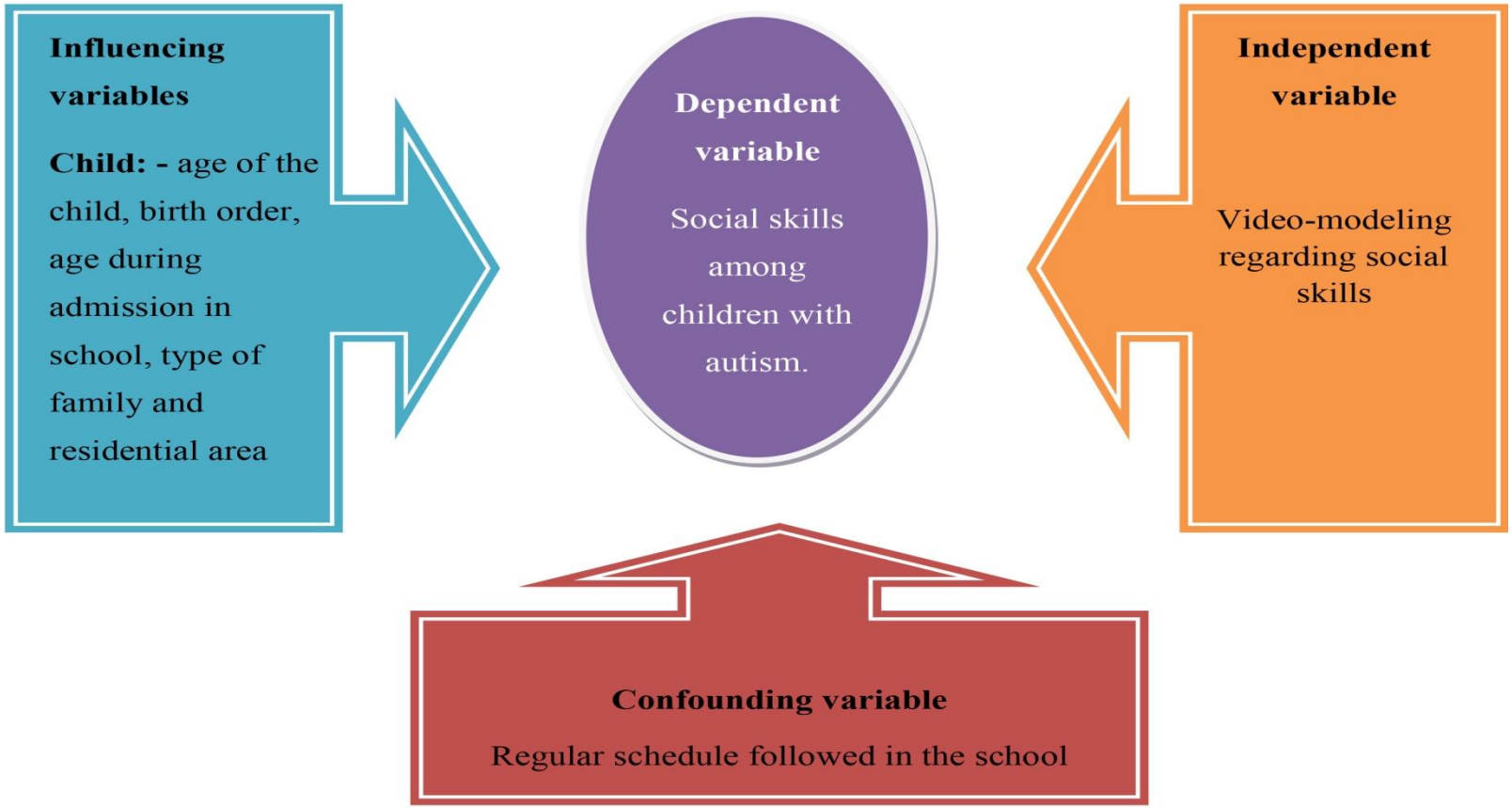

Figure 3: Relationships of variables

POPULATION

The population represents the entire set of individuals or objects having some common characteristics selected for the study **(Suresh K Sharma, 2014)**.

The target populations were 130 children with autism from three selected schools in which 70 children were the accessible population who met the inclusion and exclusion criteria, among them 40 samples were selected randomly for the study.

SAMPLE SIZE

The sample size was determined by using sample size determination formula

$$\textbf{Sample size (n)} = \left[\frac{\mathbf{S.\ t_{(n-1\ \alpha/2)}}}{\mathbf{d}} \right]^{\mathbf{2}}$$

Where

S = variance

t = tabulated value

d = marginal error

S = 2.45 $\quad t_{(n-1,\ \alpha/2)} = 2.26 \quad d = 0.9$

$$n = \left[\frac{2.45 \times 2.26}{0.9} \right]^{2}$$

n = 37.8

Hence, sample size taken for the study is 40.

SAMPLING TECHNIQUE

The investigator used stratified random sampling technique to select the children who fulfilled the inclusion criteria. The samples were selected proportionately from three schools, 17 children from Kaumaran Prashanthi Academy, 13 children from Star special school and 10 children from Adith special school. The selected children were then randomly assigned into experimental and control group in each school by lottery method.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria

- Children with autism between age group of 6 and 12 yrs.
- Children who are willing to participate.
- Children who are able to sit in a place for at least 30 minutes for watching videos.
- Children who can understand Tamil and English.

Exclusion criteria

- Children with other associated disorders like learning disabilities and Attention deficit hyperactive disorder.
- Children with visual acuity problem such as low vision and refractive error.
- Children with Asperger's syndrome.
- Children who are sick during the study.

DESCRIPTION OF TOOL

The tool consists of two sections

Section A: Demographic Data

It consists of Age of the child, Gender, Birth order of the child, Number of siblings, History of autism among siblings, Age during admission in school, Age of the mother during child birth, Nature of parents marriage, Type of family, Care taker of the child, Education of father, Occupation of father, Education of mother, Occupation of mother, Family income per month and Place of residence.

Section B: Modified Autism Social Skills Profile

It comprises of 20 items in a checklist. By observation method the social skills of children with autism are assessed. Each positive response carries 1mark and negative response carries 0. The maximum possible score is 20 and the minimum score is 0. The scores are interpreted as,

Percentage	Social Skills
76 -100 %	Above Average social skills
51-75 %	Average social skills
Below 50 %	Below average social skills

CONTENT VALIDITY

The validity refers to the degree to which an instrument measures what it is supposed to be measuring **(Polit and Hungler).** Content validity is concerned with scope of coverage of the content area to be measured. It is a case of expert judgement about the content area included in the research instrument to measure a particular phenomenon **(Suresh K Sharma,2014)**.

The tool was submitted to various expert of the department of child health nursing. A criterion rating scale for validation of the tool was developed. Experts were asked to give their opinion and valuable suggestions about the content of the tool. Minor modifications were made as per expert's opinion. These modifications were incorporated in the final preparation of the tool.

RELIABILITY

Reliability is the degree of consistency and accuracy with which an instrument measures the attribute for which it is designed to measure **(Suresh K Sharma, 2014)**.

The reliability of the modified autism social skills profile for children with autism was checked with split half technique, it showed r = 0.98 and hence the tool was found to be reliable.

PILOT STUDY

A pilot study is a small scale study conducted to test the plan and method of a research study**.** It is a small version or trial run designed to test the methods to be used in the actual study which acquaints the researcher with problems that can be corrected in a proportion and provides the researcher an opportunity to try out the procedure, methods and tools of data collection **(Suresh K Sharma, 2014)**.

The pilot study was conducted in a Rehabilitation Centre for Autism at Ramanathapuram. After getting permission from the management the study was conducted for 10 children with autism. The tool used for the study was found to be feasible. After conducting the pilot study the researcher had modified the tool and proceeded with the main study.

METHOD OF DATA COLLECTION

A written permission was obtained to conduct the study in three special schools in Coimbatore for a period of 5 weeks. Stratified random sampling technique was adopted to select the samples and 40 samples were assigned as experimental (20) and control group (20). Data regarding the demographic variables was collected from parents or family members using interview method.

Pre-test was conducted for experimental and control group to assess the social skills by using Modified Autism social skills profile which includes Communication, Involving in group activity and play, and Turn taking through observation method. The children in the experimental group were given video-modeling for 30 minutes twice in a week for five weeks. Post test – I was conducted at the end of third week and post test – II was conducted at the end of fifth week using the same tool for the experimental and control group.

PLAN FOR DATA ANALYSIS

Data was analyzed on the basis of objectives and testing of hypothesis by using descriptive and inferential statistics.

i) Descriptive statistics were used to analyze the frequency, percentage, mean and standard deviation of the following variables.

a) Demographic variables of children with autism

b) Social skills among children with autism

ii) Inferential statistics were used to determine the comparison and association.

a) Paired t test were used to compare the pretest and post test – I and post test – II social skills among children with autism.

b) Z test was used to compare the post test-I and post test-II social skills among children with autism between experimental and control group.

c) Chi square test was used to associate the social skills among children with autism and selected demographic variables in both experimental and control group.

CHAPTER –IV

DATA ANALYSIS AND INTERPRETATION

Analysis is the process of organizing and synthesizing the data so as to answer research questions and test hypothesis. Analysis and interpretation of data includes compilation, editing, coding, classification, and presentation of data. Analysis is the process of organizing and synthesizing the data so as to answer research questions and test hypothesis **(Suresh K Sharma, 2014)**. Interpretations are the process of making sense of study results and examine their implications **(Polit and Beck, 2009).**

This chapter deals with the analysis and interpretation of data collected from 40 children with autism in selected three special schools, Coimbatore. The findings based on descriptive and inferential statistical analysis are tabulated as follows:

Table 4.1 Distribution of demographic variables among children with autism.

Table 4.2 Distribution of social skills among children with autism in experimental group.

Table 4.3 Distribution of social skills among children with autism in control group.

Table 4.4 Comparison of pretest and post test-I social skills among children with autism in experimental group.

Table 4.5 Comparison of pretest and post test-II social skills among children with autism in experimental group.

Table 4.6 Comparison of social skills of post test-I among children with autism between experimental and control group.

Table 4.7 Comparison of social skills of post test-II among children with autism between experimental and control group.

Table 4.8 Association between the pretest score of social skills and selected demographic variables in experimental group.

Table 4.9 Association between the post test-II score of social skills and selected demographic variables in experimental group.

Table 4.10 Association between the pretest score of social skills and selected demographic variables in control group.

Table 4.11 Association between the post test-II score of social skills and selected demographic variables in control group.

Table 4.1 Distribution of demographic variables among children with autism.

n = 40

S.No	Demographic variables	Experimental group		Control group	
		No	**%**	**No**	**%**
1.	Age of child in years				
	a. 6-8	4	20	7	35
	b. 8-10	4	20	6	30
	c. 10-12	12	60	7	35
2.	Gender				
	a. Male	15	75	18	90
	b. Female	5	25	2	10
3.	Birth order				
	a. First	14	70	10	50
	b. Second	6	30	10	50
	c. Third and above	-	-	-	-
4.	Number of siblings				
	a. One	11	55	8	40
	b. Two or more	-	-	5	25
	c. None	9	45	7	35
5.	History of autism among siblings				
	a. Yes	-	-	1	5
	b. No	20	100	19	95
6.	Age during admission in school				
	a. 5yrs or below 5yrs of age	15	75	13	65
	b. 6yrs of age	5	25	7	35
	c. 7yrs and above	-	-	-	-
7.	Age of the mother during child birth	4	20	2	10
	a. Below 20 years	16	80	18	90
	b. 21-30yrs	-	-	-	-
	c. 31-40yrs	-	-	-	-
	d. above 41yrs				
8.	Nature of parents marriage				
	a. Consanguineous	5	25	3	15
	b. Non- consanguineous	15	75	17	85

9.	Type of family				
	a. Joint	9	45	7	35
	b. Nuclear	11	55	13	65
	c. Extended	-	-	-	-
10.	Care taker of the child				
	a. Parents	15	75	16	80
	b. Grand parents	5	5	4	20
	c. Babysitter	-	-	-	-
	d. Relatives /others	-	-	-	-
11.	Education of father				
	a. Illiterate	1	5	1	5
	b. Primary education	-	-	-	-
	c. Secondary education	-	-	3	15
	d. Higher secondary education	6	30	5	25
	e. Collegiate	13	65	11	55
12.	Occupation of father				
	a. Government employee	3	15	-	-
	b. Private employee	12	60	13	65
	c. Daily wager	2	10	3	15
	d. Self employee	3	15	4	20
	e. Unemployed	-	-	-	-
13.	Education of mother				
	a. Illiterate	-	-	1	5
	b. Primary education	-	-	-	-
	c. Secondary education	3	15	-	-
	d. Higher secondary education	7	35	5	25
	e. Collegiate	10	50	14	70
14.	Occupation of mother				
	a. Government employee	-	-	-	-
	b. Private employee	4	20	5	25
	c. Daily wager	1	5	-	-
	d. Self employee	-	-	1	5
	e. Home maker	15	75	14	70
15.	Family income per month				
	a. Below ₹ 10, 000/-	2	10	2	10
	b. ₹ 10, 000 – ₹ 20, 000/-	7	35	7	35
	c. Above ₹ 20, 000/-	11	55	11	55
16.	Place of residence				
	a. Rural	3	15	3	15
	b. Urban	11	55	10	50
	c. Semi- urban	6	30	7	35

The table shows the distribution of demographic variables among children with autism.

Regarding the age of child, in experimental group, 4 (20%) of them are between 6-8years of age, 4 (20%) of them are between 8-10 years of age, 12 (60%) of them are between 10-12 years of age. In control group, 7 (35%) of them are between 6-8years of age, 6 (30%) of them are between 8-10 years of age, 7 (35%) of them are between 10-12 years of age.

Regarding the gender of child, in experimental group, 15 (75%) of them were males and 5 (25%) of them were females. In control group, 18 (90%) of them were males and 2 (10%) of them were females.

Regarding the birth order of child, in experimental group 14 (70%) of them were the first child and 6 (30%) of them were second child. In control group 10 (50%) of them were first child and 10 (50%) of them were second child.

Regarding number of siblings, in experimental group 9 (45%) of them had no sibling and 11(55%) of them had one sibling. In control group 7 (35%) of them had no sibling 8 (40%) of them had one sibling and 5 (25%) of them had two siblings.

Regarding the history of autism among siblings, in experimental group none of them had history of autism among siblings. In control group, 1 (5%) had history of autism among siblings and 19 (95%) of them had no history of autism among siblings.

Regarding the age during admission in school, in experimental group 15 (75%) of them were admitted below 5 year of age 5 (25%) of them were admitted between 5-6 years of age and none of them were admitted above 7years of age.

Regarding the age of mother during child birth, in experimental group 4 (20%) of them were below 20 years of age, 16 (80%) of them were between 21 to 30 years of age and none of them were above 30 years of age. In control group 2 (10%) of them were below 20 years of age, 18 (90%) of them were between 21 to 30 years of age and none of them were above 30 years of age.

Regarding the nature of parents marriage, in experimental group 5 (25%) of them had consanguineous marriage and 15 (75%) of them had non-consanguineous

marriage. In control group 3 (15%) of them had consanguineous marriage and 17 (85%) of them had non-consanguineous marriage.

Regarding the type of the family, in the experimental group 9 (45%) of them belong to joint family and 11 (55%) of them belongs to nuclear family. In the control group 7 (35%) of them belong to joint family and 13 (65%) of them belong to nuclear family.

Regarding the caretaker of the child, in the experimental group, 15 (75%) of them were taken care by parents, 5 (25%) of them were taken care by grandparents. In the control group, 16(80%) of them were taken care by parents, 4 (20%) of them were taken care by grandparents.

Considering the educational status of the father, in experimental group 1 (5%) is illiterate, none of them were with primary and secondary level of education, 6 (30%) fathers had higher secondary level education and 13 (65%) fathers were collegiate. In control group 1 (5%) of them is illiterate, none of them were with primary level of education 3 (15%) fathers had secondary level education, 5 (25%) fathers had higher secondary level education and 11 (55%) fathers were collegiate.

Regarding the occupational status of the father, in experimental group 3 (15%) fathers were government employees, 12 (60%) fathers were private employees, 2 (10%) fathers were daily wager and 3 (15%) fathers were self employee and none of the fathers were unemployed. In control group none of fathers were government employees, 13 (65%) fathers were private employees, 3 (15%) fathers were daily wager and 4 (20%) fathers were self employee and none of the fathers were unemployed.

Considering the educational status of the mother, in experimental group, none of the mothers were illiterate or had primary level of education, 3 (15%) mothers had secondary level of education, 7 (35%) mothers had higher secondary level education and 10 (50%) mothers were collegiate. In control group 1 (5%) of them is illiterate, none of them were with primary and secondary level education, 5 (25%) mothers had higher secondary level education and 14 (70%) mothers were collegiates.

Regarding the occupational status of the mother, in experimental group none of them were government employees, 4 (20%) mothers were private employee,

1 (5%) mother were daily wager and none of mother were self employee and 15 (75%) mothers were homemaker. In control group none of mothers were government employee, 5 (25%) mothers were private employee, none of mothers were daily wager and 1 (5%) mother were self employee and 14 (70%) mothers were homemaker.

Regarding the income of the family, in experimental group 2 (10%) families had the income below ₹ 10,000, 7 (35%) families had the income between ₹ 10,000 to ₹ 20,000 and 11 (55%) families had the income above ₹ 20,000. In control group 2 (10%) families had the income below ₹ 10,000, 7 (35%) families had the income between ₹ 10,000 to ₹ 20,000 and 11 (55%) families had the income above ₹ 20,000.

Regarding the residential area, in the experimental group 3 (15%) of them were residing in rural area, 11 (55%) of them were residing in urban area and 6 (30%) were residing in semi-urban area. In the control group 3 (15%) of them were residing in rural area, 10 (50%) of them were residing in urban area and 7 (35%) were residing in semi-urban area.

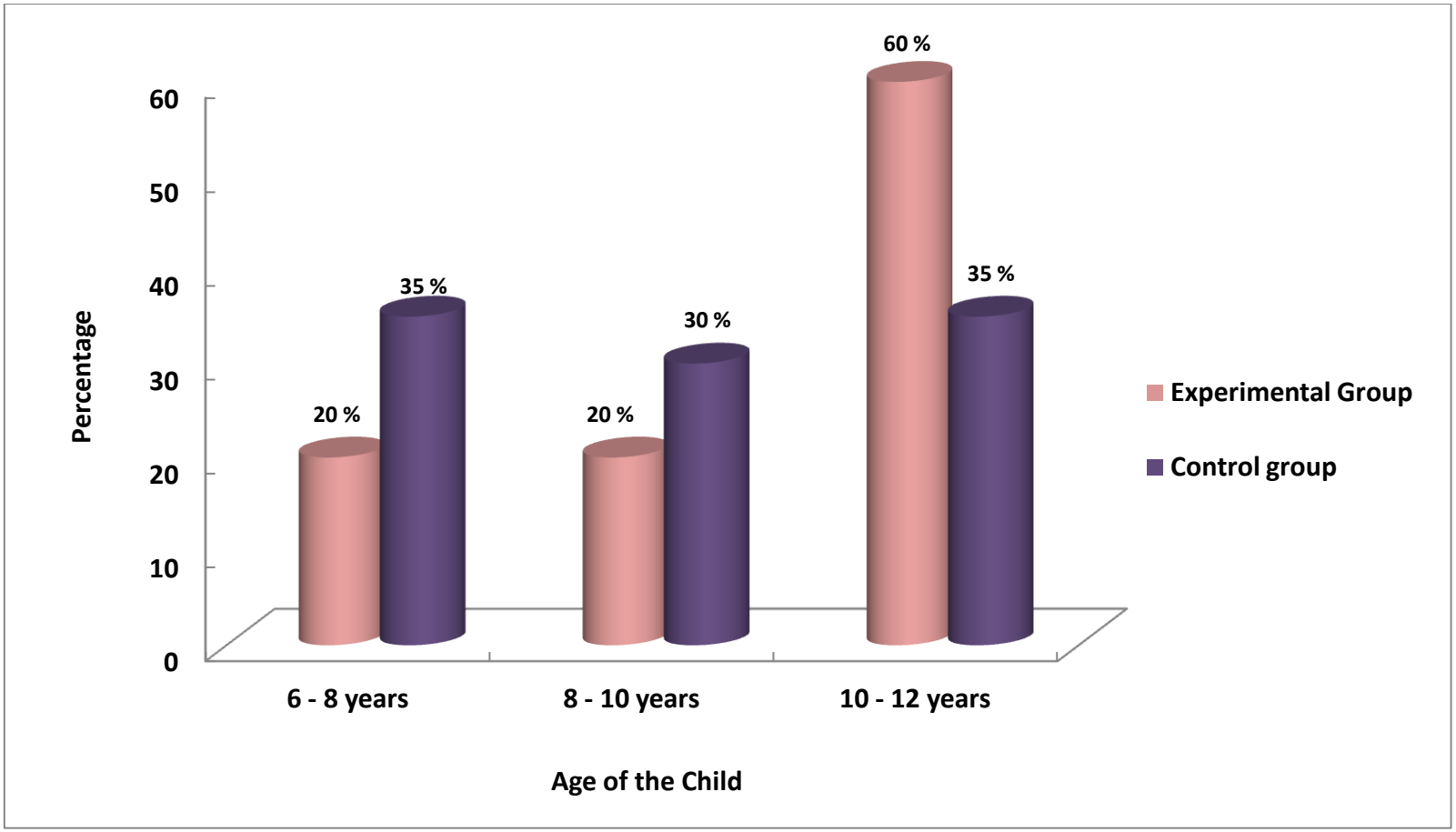

Figure 4: Distribution of age of child in years in experimental and control group

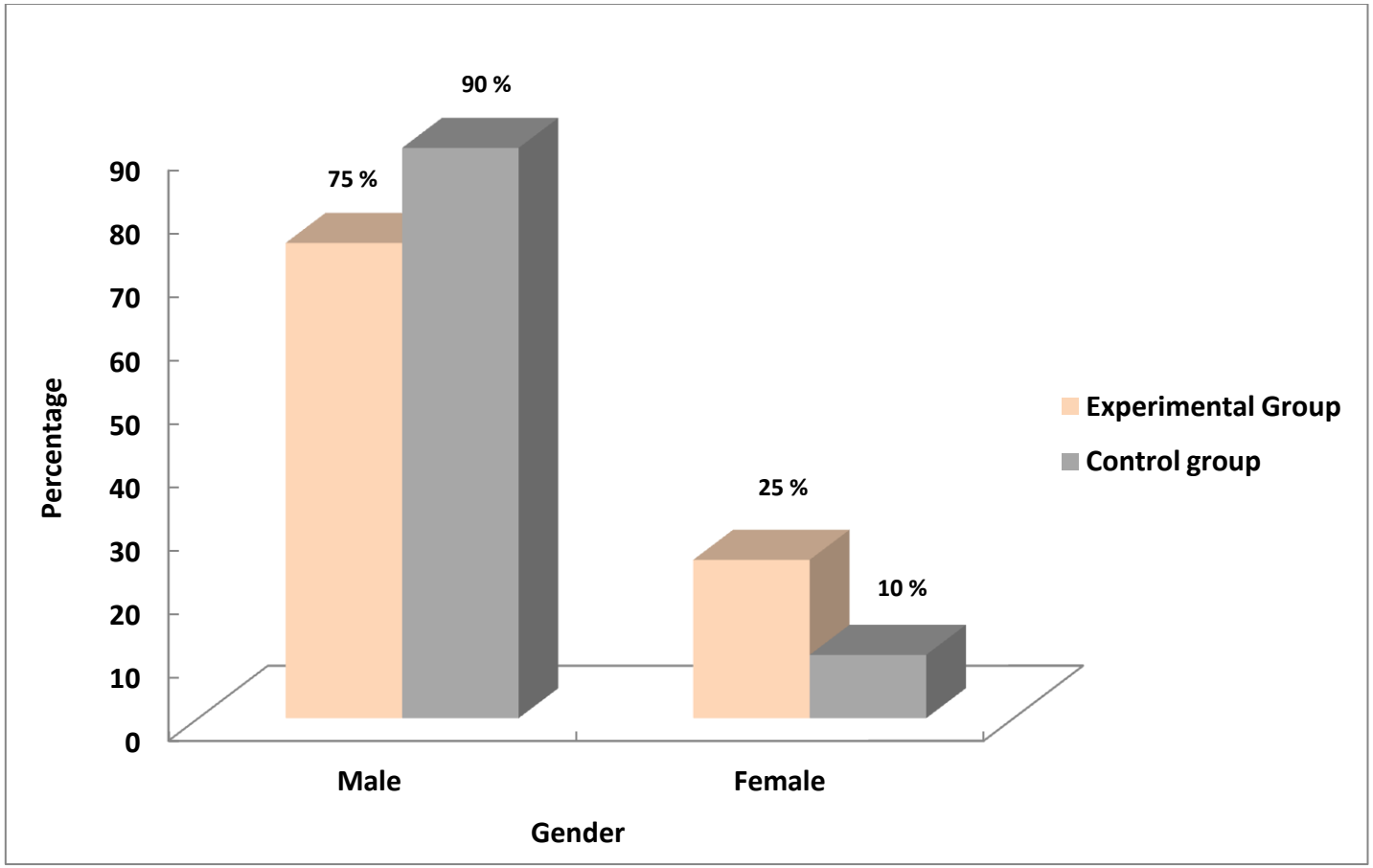

Figure 5: Distribution of gender in experimental and control group

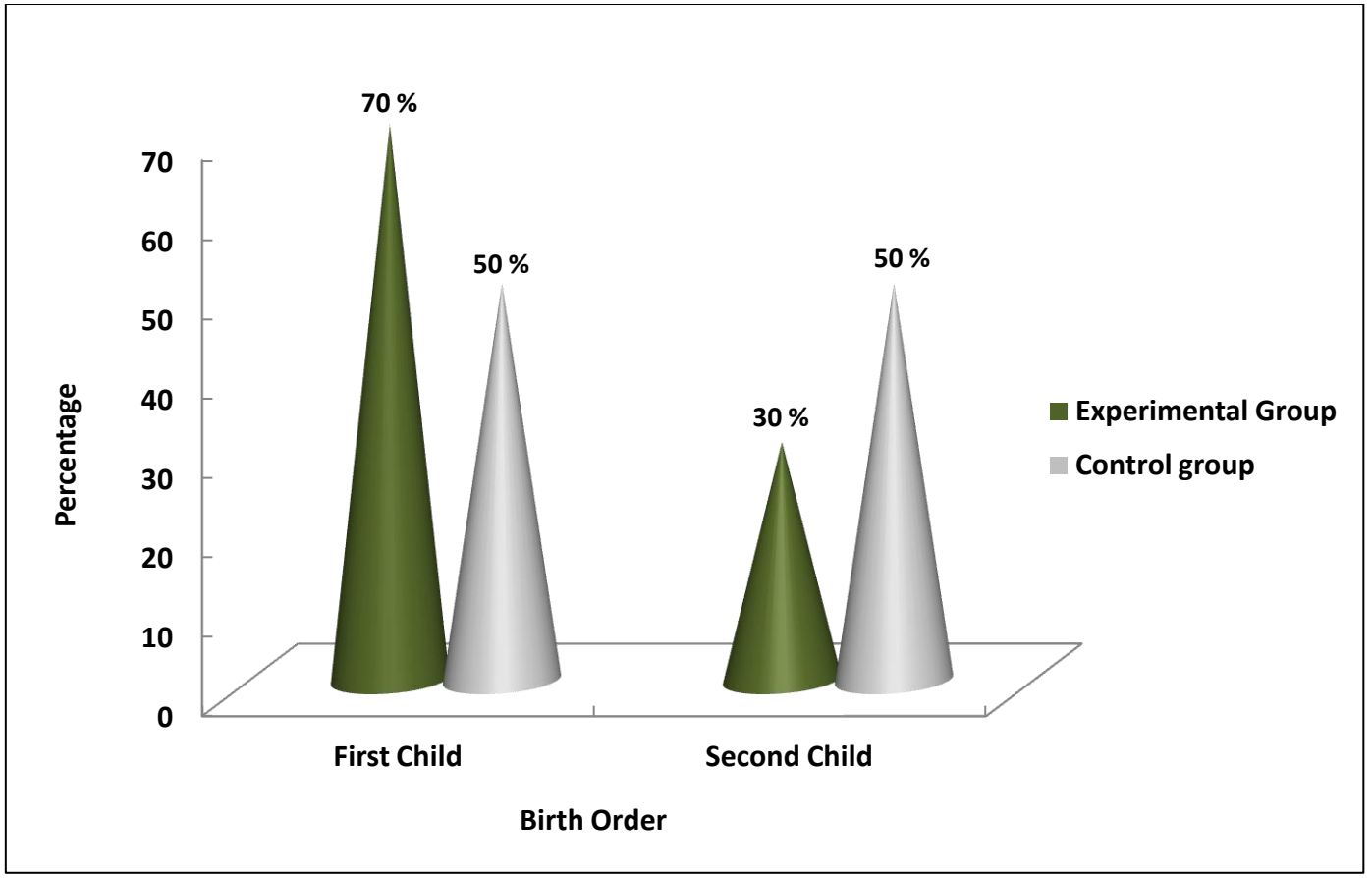

Figure 6: Distribution of birth order in experimental and control group

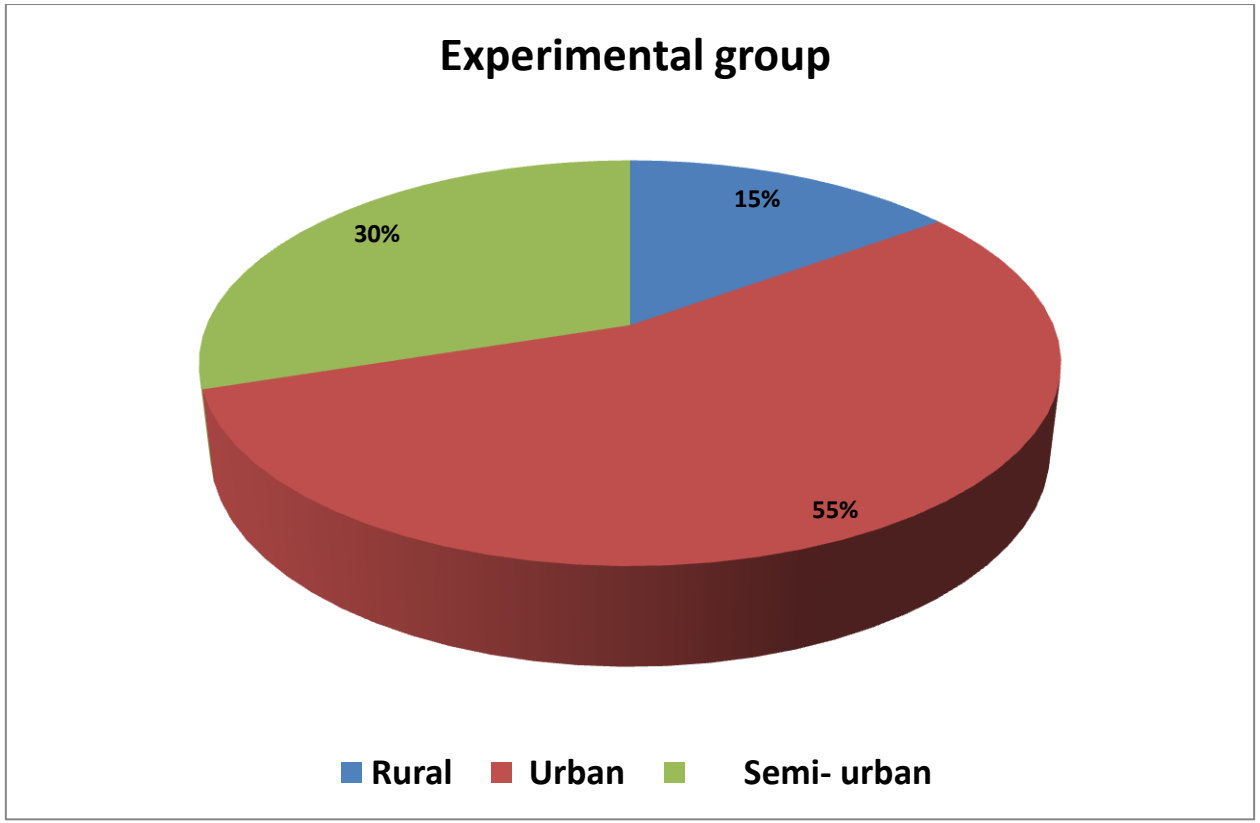

Figure 7: Distribution of place of residence in experimental group

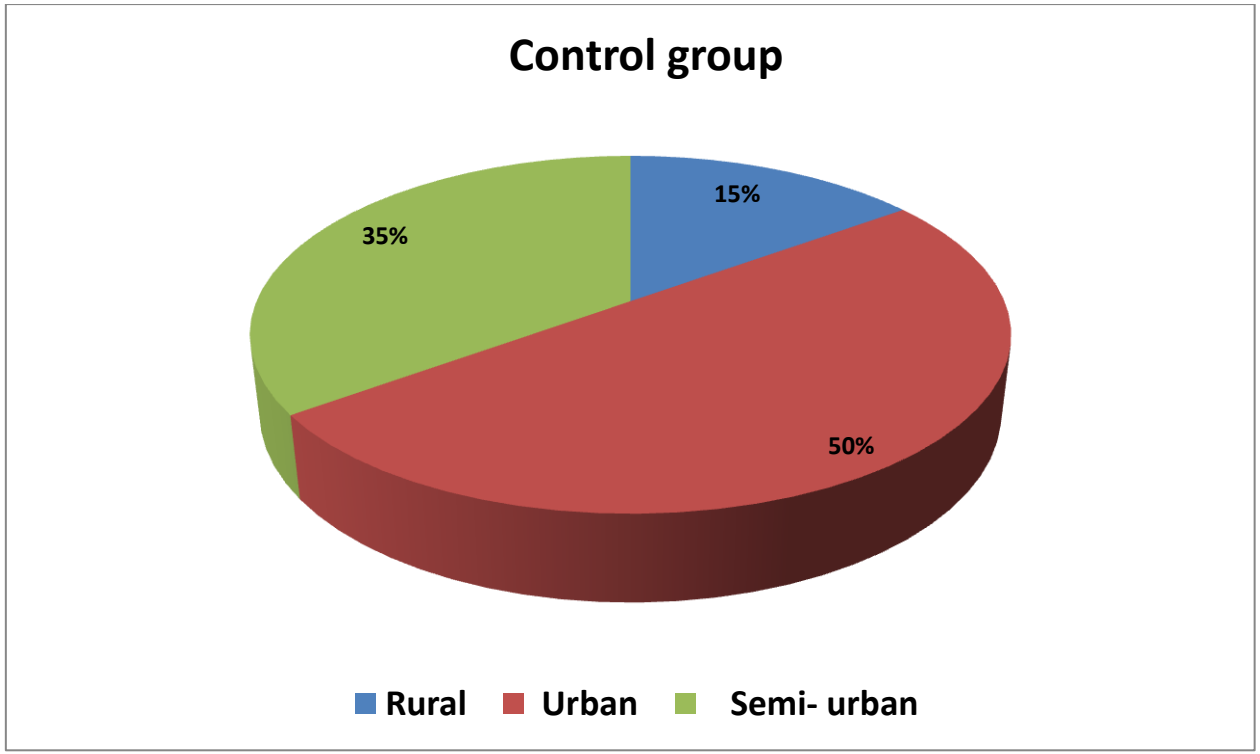

Figure 8: Distribution of place of residence in control group

Table 4.2 Distribution of social skills among children with autism in experimental group

n =20

S. No	Social skills score	Experimental group					
		Pretest		Post test-I		Post test-II	
		No	%	No	%	No	%
1.	Above average (76-100)	-	-	1	5	11	55
2.	Average (51-75)	14	70	15	75	7	35
3.	Below average (<50)	6	30	4	20	2	10

The above table shows,

In the experimental group, during the pretest, 14 (70%) children had average social skills and 6 (30%) had below average social skills and none of them had above average social skills. During post test-I, 1 (5%) child had above average social skills, 15 (75%) children had average social skills and 4 (20%) children had below average social skills. During post test-II 11 (55%) children had above average social skills, 7 (35%) children had average social skills and 2 (10%) children had below average social skills.

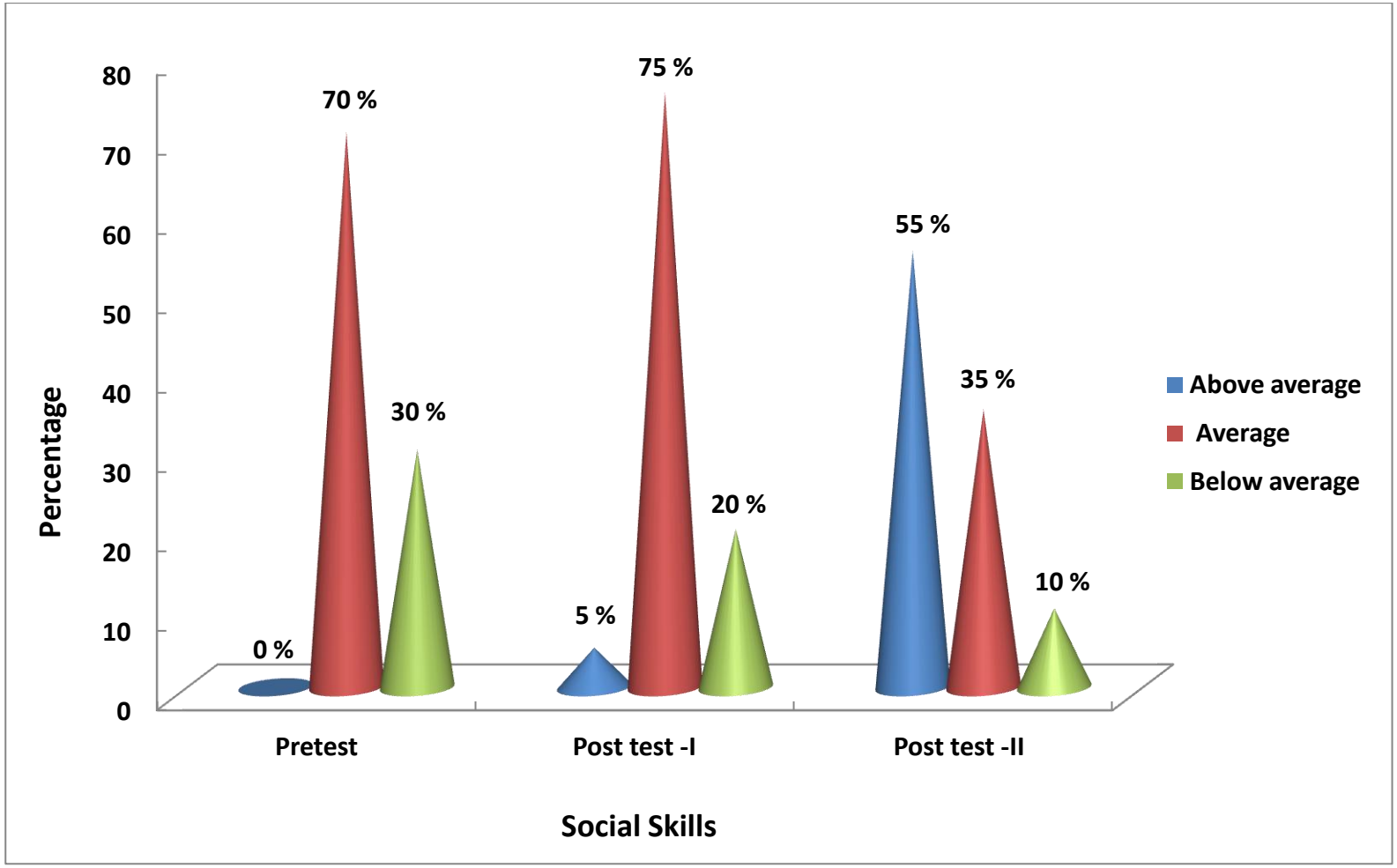

Figure 9: Distribution of social skills among children with autism in experimental group.

Table 4.3 Distribution of social skills among children with autism in control group

n =20

S. No	Social skills score	Control Group					
		Pretest		Post test-I		Post test-II	
		No	%	No	%	No	%
1.	Above average (76-100)	-	-	-	-	-	-
2.	Average (51-75)	9	45	11	55	13	65
3.	Below average (<50)	11	55	9	45	7	35

The above table shows,

In the control group, during the pretest, 9 (45%) children had average social skills and 11 (55%) had below average social skills and none of them had above average social skills. During post test-I, none of them had above average social skills, 11 (55%) children had average social skills and 9 (45%) children had below average social skills. During post test-II, none of them had above average social skills, 13 (65%) children had average social skills and 7 (35%) children had below average social skills.

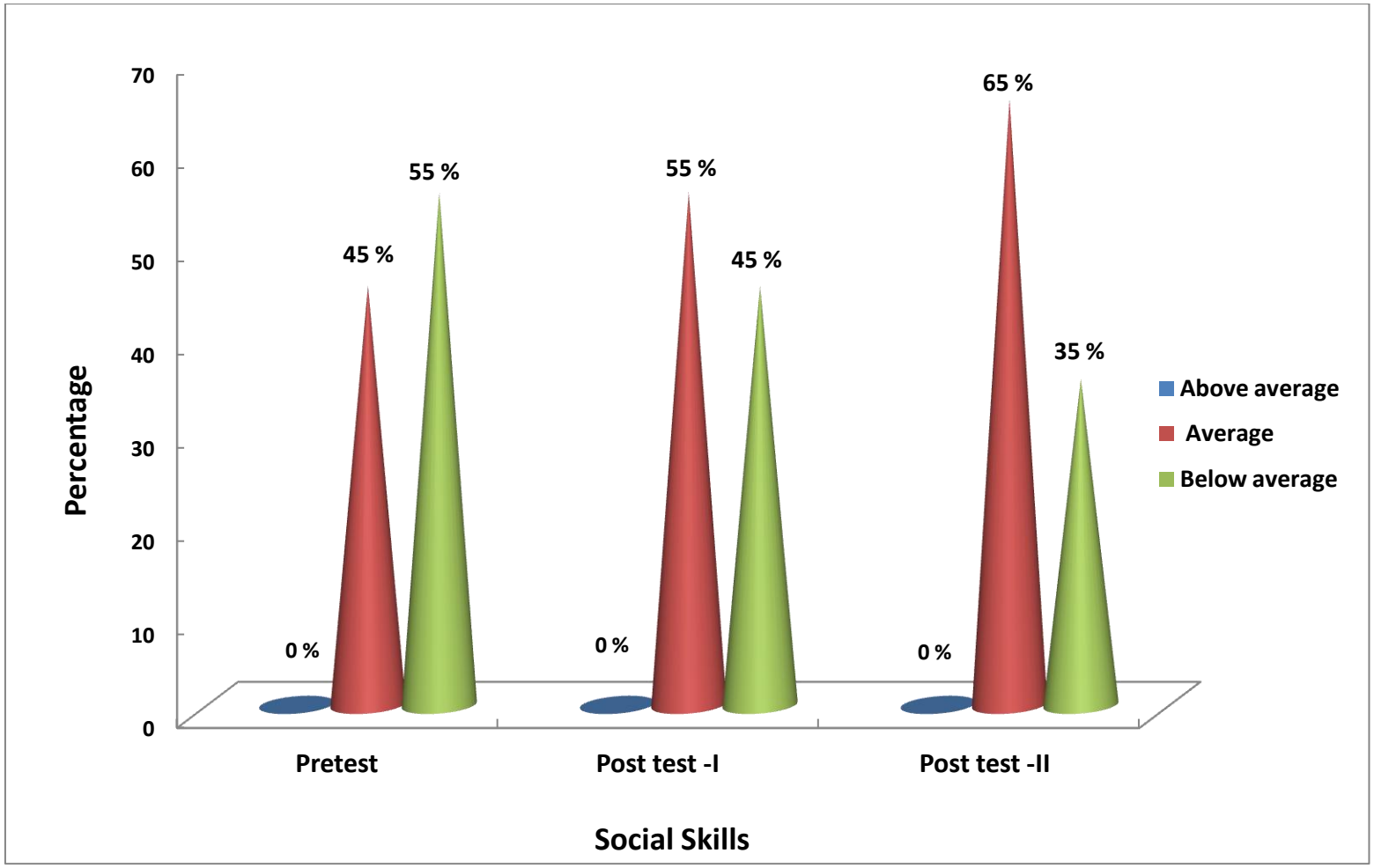

Figure 10: Distribution of social skills among children with autism in control group

Table 4.4 Comparison of pretest and post test-I social skills among children with autism in experimental group

n = 20

S. No	Social skills score	Mean	Standard deviation	Calculated value of t	Tabulated value of t at 5 % level significance
1.	**Pre test**	12.05	2.4	2.0	2.09
2.	**Post test-I**	12.35	2.13		

The above table shows,

In the experimental group, during the pretest the mean and standard deviation are 12.05 and 2.4 and during post test-I the mean and standard deviation are 12.35 and 2.13.With regard to the social skills, the calculated value of t is less than the tabulated value of t at 5% level of significance. So, the null hypothesis is accepted. Therefore, there is no significant difference between pretest and post test-I social skills scores.

Table 4.5 Comparison of pretest and post test-II social skills among children with autism in experimental group

n = 20

S. No	Social skills score	Mean	Standard deviation	Calculated value of t	Tabulated value of t at 5 % level significance
1.	**Pre test**	12.05	2.4	10.56	2.09
2.	**Post test-II**	14.9	2.95		

The above table shows,

In the experimental group, during the pretest the mean and standard deviation are 12.05 and 2.4 and during post test-II the mean and standard deviation are 14.9 and 2.95. With regard to the social skills, the calculated value of t is greater than the tabulated value of t at 5% level of significance. So, the null hypothesis is rejected. Therefore, there is a significant difference between pretest and post test-II social skills scores. Hence, the study concludes that video-modeling is effective in improving social skills among children with autism.

Table 4.6 Comparison of social skills of post test-I among children with autism between experimental and control group

n= 40

S. No	Social skills score	Mean	Standard deviation	Calculated value of Z	Tabulated value of Z at 5 % level of significance
1.	**Experimental group**	12.35	2.13	4.09	1.96
2.	**Control group**	10.55	2.04		

The above table shows,

In the experimental group, the mean and standard deviation are 12.35 and 2.13 and in the control group the mean and standard deviation are 10.55 and 2.04. With regard to the social skills, the calculated value of Z is greater than the tabulated value of Z at 5% level of significance. So, the null hypothesis is rejected. Therefore, there is a significant difference in social skills between experimental and control group. It shows that video-modeling is effective in improving social skills among children with autism in the experimental group.

Table 4.7 Comparison of social skills of post test-II among children with autism between experimental and control group

n= 40

S. No	Social skills score	Mean	Standard deviation	Calculated value of Z	Tabulated value of Z at 5 % level of significance
1.	**Experimental group**	14.9	2.95	4.57	1.96
2.	**Control group**	11.1	2.22		

The above table shows,

In the experimental group, the mean and standard deviation are 14.9 and 2.95 and in the control group the mean and standard deviation are 11.1 and 2.22. With regard to the social skills, the calculated value of Z is greater than the tabulated value of Z at 5% level of significance. So, the null hypothesis is rejected. Therefore, there is a significant difference in social skills between experimental and control group. It shows that video-modeling is effective in improving social skills among children with autism in the experimental group.

Table 4.8 Association between the pretest score of social skills and selected demographic variables in experimental group

n=20

S. No	Variables	Below median	Above median	Calculated value of χ^2	Tabulated value of χ^2 at 5% level of significance
1.	Age of child in yrs a) 6-10 b) 10-12	 5 5	 4 6	 <1 NS	3.841
2.	Birth order a) First b) Second	 2 8	 8 2	 **5** **S**	
3.	Age during admission in school a) Below 5 years b) Above 5years	 6 4	 8 2	 <1 NS	
4.	Age of the mother during child birth a) Below 20 b) Above 20	 2 8	 2 8	 <1 NS	
5.	Nature of parents marriage a) Consanguineous b) Non-consanguineous	 3 7	 2 8	 <1 NS	
6.	Type of family a) Joint b) Nuclear	 5 5	 3 7	 <1 NS	
7.	Education of father a) School education b) College education	 2 8	 5 5	 <1 NS	
8.	Place of residence a) Rural b) Urban	 4 6	 6 4	 <1 NS	

S-Significant **NS- Not Significant**

The above table shows the association between the pretest score of social skills and the selected demographic variables in the experimental group. The table shows the calculated value is lesser than the tabulated value of χ^2 at 5% level of significance. Therefore,

- There is no association between age of child and social skills among children with autism
- There is no association between age during admission in school and social skills among children with autism
- There is no association between age of mother during child birth and social skills among children with autism
- There is no association between nature of parents marriage and social skills among children with autism
- There is no association between type of family and social skills among children with autism
- There is no association between education of father and social skills among children with autism
- There is no association between place of residence and social skills among children with autism

Regarding the birth order of the child, the calculated value of χ^2 is greater than the tabulated value of χ^2 at 5% level of significance. Therefore, there is an association between the birth order of child and social skills among children with autism.

Table 4.9 Association between the post test-II score of social skills and selected demographic variables in experimental group

n=20

S. No	Variables	Below median	Above median	Calculated value of χ^2	Tabulated value of χ^2 at 5% level
1.	Age of child in yrs a) 6-10 b) 10-12	 3 7	 5 5	 <1 NS	3.841
2.	Birth order a) First b) Second	 5 3	 9 3	 <1 NS	
3.	Age during admission in school a) Below 5 years b) Above 5years	 5 3	 10 2	 <1 NS	
4.	Age of the mother during child birth a) Below 20 b) Above 20	 6 2	 10 2	 <1 NS	
5.	Nature of parents marriage a) Consanguineous b) Non-consanguineous	 3 6	 2 9	 <1 NS	
6.	Type of family a) Joint b) Nuclear	 4 4	 5 7	 <1 NS	
7.	Education of father a) School education b) College education	 2 6	 5 7	 <1 NS	
8.	Place of residence a) Rural b) Urban	 6 2	 1 11	 <1 NS	

S-Significant **NS- Not Significant**

The above table shows the association between the post test –II score of social skills and the selected demographic variables in the experimental group. The table shows the calculated value is lesser than the tabulated value of χ^2 at 5% level of significance. Therefore,

- There is no association between the age of child and social skills among children with autism
- There is no association between the birth order of child and social skills among children with autism
- There is no association between the age during admission in school and social skills among children with autism
- There is no association between the age of mother during child birth and social skills among children with autism
- There is no association between the nature of parents marriage and social skills among children with autism
- There is no association between the type of family and social skills among children with autism
- There is no association between the education of father and social skills among children with autism
- There is no association between the place of residence and social skills among children with autism

Table 4.10 Association between the pretest score of social skills and selected demographic variables in control group

n=20

S. No	Variables	Below median	Above median	Calculated value of χ^2	Tabulated value of χ^2 at 5% level of significance
1.	Age of child in yrs a) 6-10 b) 10-12	 6 4	 8 2	 <1 NS	3.841
2.	Birth order a) First b) Second	 3 9	 7 1	 **5.21** **S**	
3.	Age during admission in school a) Below 5 years b) Above 5years	 7 4	 6 3	 <1 NS	
4.	Age of the mother during child birth a) Below 20 b) Above 20	 1 8	 1 10	 <1 NS	
5.	Nature of parents marriage a) Consanguineous b) Non-consanguineous	 1 10	 2 7	 <1 NS	
6.	Type of family a) Joint b) Nuclear	 4 7	 3 6	 <1 NS	
7.	Education of father a) School education b) College education	 6 5	 3 6	 <1 NS	
8.	Place of residence a) Rural b) Urban	 1 10	 2 7	 <1 NS	

S-Significant **NS- Not Significant**

The above table shows the association between the pre test score of social skills and the selected demographic variables in the control group. The table shows the calculated value is lesser than the tabulated value of χ^2 at 5% level of significance. Therefore,

- There is no association between age of child and social skills among children with autism
- There is no association between age during admission in school and social skills among children with autism
- There is no association between age of mother during child birth and social skills among children with autism
- There is no association between nature of parents marriage and social skills among children with autism
- There is no association between type of family and social skills among children with autism
- There is no association between education of father and social skills among children with autism
- There is no association between place of residence and social skills among children with autism

Regarding the birth order of the child, the calculated value of χ^2 is greater than the tabulated value of χ^2 at 5% level of significance. Therefore, there is an association between the birth order of child and social skills among children with autism.

Table 4.11 Association between the post test-II score of social skills and selected demographic variables in control group

n=20

S. No	Variables	Below median	Above median	Calculated value of χ^2	Tabulated value of χ^2 at 5% level of significance
1.	Age of child in yrs a) 6-10 b) 10-12	 7 4	 6 3	 <1 NS	3.841
2.	Birth order a) First b) Second	 5 6	 5 4	 <1 NS	
3.	Age during admission in school a) Below 5 years b) Above 5years	 6 4	 7 3	 <1 NS	
4.	Age of the mother during child birth a) Below 20 b) Above 20	 1 9	 1 9	 <1 NS	
5.	Nature of parents marriage a) Consanguineous b) Non-consanguineous	 2 8	 1 9	 <1 NS	
6.	Type of family a) Joint b) Nuclear	 4 6	 3 7	 <1 NS	
7.	Education of father a) School education b) College education	 4 6	 3 7	 <1 NS	
8.	Place of residence a) Rural b) Urban	 2 8	 1 9	 <1 NS	

S-Significant **NS- Not Significant**

The above table shows the association between the post test-II score of social skills and the selected demographic variables in the experimental group. The table shows the calculated value is lesser than the tabulated value of χ^2 at 5% level of significance. Therefore,

- There is no association between age of child and social skills among children with autism
- There is no association between age during admission in school and social skills among children with autism
- There is no association between birth order of child and social skills among children with autism
- There is no association between age of mother during child birth and social skills among children with autism
- There is no association between nature of parents marriage and social skills among children with autism
- There is no association between type of family and social skills among children with autism
- There is no association between education of father and social skills among children with autism
- There is no association between place of residence and social skills among children with autism

CHAPTER –V

RESULTS AND DISCUSSION

The purpose of the study was to assess the effectiveness of video-modeling on social skills among children with autism. The data were collected with the help of modified autism social skills profile to assess the social skills among children with autism. The result of the study was based on statistical analysis. The effectiveness of video-modeling was assessed by using paired t test. Z test was used to compare the social skills among children with autism between experimental and control group. Chi square was used to find out the association of social skills among children with autism in experimental and control group with selected demographic variables. The results of the study have been discussed according to the stated objectives.

1. To assess the level of social skills among children with autism in experimental and control group

Table 4.2 shows the distribution of social skills among children with autism in experimental group. In pretest, 14 (70%) children had average social skills and 6 (30%) had below average social skills and none of them had above average social skills.

Table 4.3 shows the distribution of social skills among children with autism in control group. In pretest, 9 (45%) children had average social skills and 11 (55%) had below average social skills and none of them had above average social skills.

2. To assess the effectiveness of video-modeling on social skills among children with autism in experimental group

Table 4.4 shows comparison of social skills among children with autism in pretest and post test-I in the experimental group. During the pretest, the mean and standard deviation are 12.05 and 2.4 and during post test-I the mean and standard deviation are 12.35 and 2.13.With regard to the social skills the calculated value of t is less than the tabulated value of t at 5% level of significance. So, the null hypothesis is accepted. Therefore, there is no significance difference between pretest and post test-I social skills scores.

Table 4.5 shows comparison of social skills among children with autism in pretest and post test-II in the experimental group. During the pretest, the mean and standard deviation are 12.05 and 2.4 and during post test-II the mean and standard deviation are 14.9 and 2.95.With regard to the social skills, the calculated value of t is greater than the tabulated value of t at 5% level of significance. So, the null hypothesis is rejected. Therefore, there is a significance difference between pretest and post test-II social skills scores. Hence, we conclude that video-modeling is effective intervention in improving social skills among children with autism.

The present study is consistent with the experimental study which was conducted to determine the impact of video-modeling on improving social skills for children with autism. The 5 children were selected by autism rating scale and by using autism behavior checklist pre test were conducted. The four target behavior responses were modeled, two sessions were conducted each day for six weeks, each session lasted for 3 to 5minutes. Post test conducted one month after the intervention. The result shows the mean difference of the pre intervention score was 26.6 and post intervention score was 37.6. Thus, the results show that the video-modeling is effective in improving social skills of children with autism **(Mohammed Alzyoudi, 2014).**

3. To compare the social skills among children with autism between experimental and control group after video-modeling

Table 4.6 shows comparison of posttest I social skills between experimental and control group. In the experimental group, the mean and standard deviation are 12.35 and 2.13 and in the control group the mean and standard deviation are 10.55 and 2.04. With regard to the social skills, the calculated value of Z is greater than the tabulated value of Z at 5% level of significance. So, the null hypothesis is rejected. Therefore, there is a significant difference in social skills between experimental and control group. It shows that video modeling is effective in improving social skills among children with autism in the experimental group.

Table 4.7 shows comparison of posttest II social skills between experimental and control group. In the experimental group, the mean and standard deviation are 14.9 and 2.95 and in the control group the mean and standard deviation are 11.1 and 2.22 .With regard to the social skills, the calculated value of Z is greater than the

tabulated value of Z at 5% level of significance. So, the null hypothesis is rejected. Therefore, there is a significant difference in social skills between experimental and control group. . It shows that video-modeling is effective in improving social skills among children with autism in the experimental group.

The present study was supported by an experimental study that was conducted to determine the effects of video modeling on social initiations for children with autism. Three children were selected between age group of 7 to 9 years by using childhood autism rating scale and the scores varied from mild to moderate. Four videotaped session of different play were showed, each video was played for 35 seconds. The social initiation of children was assessed after the intervention was given. The child showed social initiation within 25 seconds after three consecutive sessions, thus it concluded that child attained the targeted skill. Thus it showed that social initiations were improved through video modeling for the children with autism **(Michael Christos, 2004).**

4. To associate the findings with selected demographic variables

Chi square test was used to identify the association with selected demographic variables like age of the child, age during admission in school, age of mother during child birth, nature of parent's marriage, type of family, education of father and type of residence.

Table 4.8 shows association between pre test score of social skills and the selected demographic variables. The result shows that the calculated value of chi square is greater than the tabulated value at 5% level of significance. Therefore, there is an association between the birth order of child and social skills among children with autism in experimental group.

Table 4.10 shows association between pre test score of social skills and the selected demographic variables. The result shows that the calculated value of chi square is greater than the tabulated value at 5% level of significance. Therefore, there is an association between the birth order of child and social skills among children with autism in control group.

Table 4.9 and 4.11 shows the association between post test-II score of social skills of experimental and control group and selected demographic variables. The results showed that the calculated value of chi square is lesser than the tabulated value

at 5% level of significance. It is concluded that there is no association between post test scores and selected demographic variables.

CONCLUSION

Children are vital to the nation's present and its future. Good health of these precious members of the society should be ensured as prime importance in all countries. Future of children with autism should be with adequate social skills that are necessary to have successful social interactions. The present study has been supported by various series of other studies which confirmed that video-modeling is effective in improving social skills among children with autism. From analysis and results, it was concluded that video-modeling on social skills is an effective intervention in improving social skills among children with autism.

CHAPTER –VI

SUMMARY, RECOMMENDATIONS AND NURSING IMPLICATIONS

SUMMARY

The intention of the study was to assess the effectiveness of video-modeling to improve social skills among children with autism. The objectives of the study were formulated according to the need of the study. The conceptual framework developed for the study was based on Modified Imogene King's Goal Attainment theory.

An extensive review of literature, professional experience and expert's direction helped the researcher to design the methodology. The study was conducted in three different schools in Coimbatore where adequate samples were easily accessible and available. Pretest posttest control group design was adopted for this study.

The tools used for this study were demographic variables and modified autism social skills profile to assess the social skills among children with autism. The content validity of the tool was obtained from various experts in Child Health Nursing Department. Reliability of the tool was checked using split-half method. The tool was found to be reliable (r = 0.98). The ethical aspects of the research were maintained during the study period.

Pilot study was conducted in Rehabilitation centre for autism at Ramanathapuram, Coimbatore, for a period of one week for 10 children with autism. After pilot study the researcher proceeded with the main study. A written permission was obtained from Principals of three schools namely, Kaumaran Prashanthi Academy, Star special school, and Adith special school, Coimbatore.

The main study was conducted for the period of five weeks. Stratified random sampling technique was adopted to select forty samples (n=40) and the samples were assigned as experimental (20) and control group (20). Data regarding the demographic variables was collected from parents or family members using interview method. Pretest was conducted for experimental and control group to assess social skills by using Modified autism social skills profile through observation method. The children

in the experimental group were given video-modeling for 30 minutes twice in a week for five weeks. Post test – I was done at the end of third week and post test – II was done after the fifth week using the same tool. Post test for the control group was done at the end of third and fifth week using the same tool.

The demographic variables of children with autism were tabulated by using frequency distribution. The effectiveness of video-modeling and comparison of pre test, post test-I and post test -II scores of social skills were analyzed by using paired t test. It was found that the values were statistically significant at 5% level. The Z test was used to compare the effectiveness of video-modeling on post test –I and post test –II social skills between experimental and control group. The calculated value was significant at 5% level.

By using chi square analysis, association between the scores of the social skills and selected demographic variables like age of the child, age during admission in school, age of mother during child birth, nature of parent's marriage, type of family, education of father and type of residence was done respectively. The result showed that there is a significant association between social skills score and birth order among children with autism.

The results of the study revealed that the video-modeling is an effective intervention to improve the social skills among children with autism who are studying in Kaumaran Prashanthi Academy, Star special school and Adith special school, Coimbatore.

RECOMMENDATIONS

This study recommends the following for further research.

- The study can be replicated using a large sample there by findings can be generalized
- Studies can be conducted to determine effectiveness of video modeling in children with learning disability and other disorders.
- Studies can be conducted on health aspects like prevention of injury and its first –aid management to determine effectiveness of video-modeling.

- Studies can be done to determine the awareness of autism disorder and effective intervention among the parents.
- Prospective studies can be conducted to determine the impact of healthy practices and prevention of common health problems in children with autism.

LIMITATIONS

- The study could not evaluate long lasting effect of video modeling because of time constraint.
- The positive effect shown by children in the control group might have occurred due to routine classroom activities according to the academic schedule. So the researcher could not have any control on it.

NURSING IMPLICATIONS

Some of the implications from the study in various areas of nursing are as follows

NURSING SERVICES

- Nurses has to prepare and practice video-modeling in various aspect to improve the social skills among children with autism
- Nurses should teach mothers regarding video-modeling to improve social skills.
- Nurses can involve teachers in special schools in video-modeling intervention to improve social skills among children with autism.

NURSING EDUCATION

- Nursing curriculum has to focus on enabling the nursing students to inculcate the skills to provide care for these children with autism in the hospital, school and community settings and the advancement in the intervention to promote improvement in their life.
- Periodic workshops, conferences, seminars and audio – video presentations on effectiveness of video-modeling to improve social skills for children with autism can be conducted to the students to update the current information.

- An awareness programme can be organized by nursing students in community area regarding early identification of autism and its intervention to improve their lifestyles.
- Nursing colleges should include the celebration of Autism day in their yearly calendar schedule to create awareness among the nursing students.

NURSING ADMINISTRATION

- The nurse as an administrator must aim to translate the content nation-wide to promote awareness on prevalence of the autism and effective intervention among parents and public.
- The nurse administrator should take responsibility to conduct school health programmes regarding advanced intervention for children with autism
- The nurse administrator should organize the celebration of Autism day in the hospital to create awareness of autism among the employees, trainees and public.

NURSING RESEARCH

- The results of the study can be applied in clinical, special school and community by using different videos
- Adequate allocation of funds, man power, time and adequate training should be provided for nurses to conduct research to prove video-modeling as an effective intervention for improving social skills among children with autism.
- The methodology and findings of the study can further promote the researchers to go for longitudinal study to show impact of video-modeling to improve social skills among children with autism.

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APPENDIX – C

FORMAT FOR CONTENT VALIDITY

Name of the expert:

Designation:

Name of the Institution:

Respected madam/ sir,

Kindly go through the content and place the right ( ) mark against the checklist in the following columns ranging from relevant to not relevant. Wherever there is a need for modification, kindly give your valuable opinion in the remarks column.

SECTION – A DEMOGRAPHIC VARIABLES

Item No.	Relevant	Need Modification	Not Relevant	Remarks
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SECTION – B MODIFIED AUTISM SOCIAL SKILLS PROFILE

Item No.	Relevant	Need Modification	Not Relevant	Remarks
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CERTIFICATE FOR TOOL VALIDATION

This is to certify that the tool constructed by **Reg No: 301515901**, II year M.Sc Nursing student of K.G. College of Nursing, which is to be used in her study **"A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-MODELING ON SOCIAL SKILLS AMONG CHILDREN WITH AUTISM IN SELECTED SCHOOLS, COIMBATORE"** has been validated by the undersigned. The suggestions and modifications given by me will be incorporated by the investigator in concern with their respective guide.

SIGNATURE WITH SEAL

NAME:

DESIGNATION:

COLLEGE:

PLACE:

DATE:

APPENDIX- D

LIST OF EXPERTS FOR CONTENT VALIDITY

1. **Dr.C. Srinivasan, M.D**.
   Pediatrician and Neonatologist,
   K.G. Hospital,
   Coimbatore

2. **Prof .Annie Mary, M.Sc (N),**
   Professor and HOD,
   E.S. College of Nursing
   Villupuram.

3. **Prof. Lizzie Raveendran, M.Sc ,(N)**
   Principal,
   Gem Institute of Nursing Education and Research,
   Coimbatore.

4. **Mrs.Ruby Anitha, M.Sc (N),**
   Associate Professor,
   Ganga College of Nursing,
   Coimbatore.

5. **Mrs. Shanthi, M.Sc (N),**
   Vice Principal,
   G.K.N.M. Institute of Nursing,
   Coimbatore.

6. **Mrs. Sudha, M.Sc (N),**
   Assistant Professor,
   Sri Ramakrishna College of Nursing,
   Coimbatore.

7. **Dr.Sellakumar,Ph.D**

   Professor and Director,

   Asian Institute of Psycho- Diagnostics and Behaviour Research,

   Coimbatore.

8. **Mrs.Kalpana.**

   Special educator,

   Kaumaran Prashanthi Academy,

   Coimbatore.

APPENDIX – E

CERTIFICATE FOR ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the tool developed by **Reg. No: 301515901**, II year M.Sc Nursing student of K.G. College of Nursing, for Dissertation on the topic **"A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-MODELING ON SOCIAL SKILLS AMONG CHILDREN WITH AUTISM IN SELECTED SCHOOLS, COIMBATORE"** is edited for English language appropriateness by **Prof. JOSEPHINE PRINCEY, M.A., M.Phil. B.Ed.,** K.G. College of Nursing.

SIGNATURE

APPENDIX – F

TOOL

SECTION –A DEMOGRAPHIC VARIABLES

1. Age of child in years
   a. 6-8
   b. 8-10
   c. 10-12

2. Gender
   a. Male
   b. Female

3. Birth order
   a. First
   b. Second
   c. Third and above

4. Number of siblings
   a. One
   b. Two or more
   c. None

5. History of autism among siblings
   a. Yes
   b. No

6. Age during admission in school
   a. 5yrs or below 5yrs of age
   b. 6yrs of age
   c. 7yrs and above

7. Age of the mother during child birth

a. Below 20 years

b. 21-30yrs

c. 31-40yrs

d. above 41yrs

8. Nature of parents marriage

a. Consanguineous

b. Non- consanguineous

9. Type of family

a. Joint

b. Nuclear

c. Extented

10. Care taker of the child

a. Parents

b. Grand parents

c. Babysitter

d. Relatives /others

11. Education of father

a. Illiterate

b. Primary education

c. Secondary education

d. Higher secondary education

e. Collegiate

12. Occupation of father

a. Government employee

b. Private employee

c. Daily wager

d. Self employee

e. Unemployed

13. Education of mother

a. Illiterate

b. Primary education

c. Secondary education

d. Higher secondary education

e. Collegiate

14. Occupation of mother

a. Government employee

b. Private employee

c. Daily wager

d. Self employee

e. Home maker

15. Family income per month

a. Below ₹ 10, 000/-

b. ₹ 10, 000 – ₹ 20, 000/-

c. Above ₹ 20, 000/-

16. Place of residence

a. Rural

b. Urban

c. Semi- urban

SECTION-B MODIFIED AUTISM SOCIAL SKILLS PROFILE

S.No	CONTENT	PRE TEST		POST TEST-I		POST TEST-II	
		YES	NO	YES	NO	YES	NO
	I. COMMUNICATION (CONVERSATION /TOPIC MAINTENANCE)						
1.	Introduces self to others						
2.	Invites peers to join him/her activities						
3.	Responds to the greetings of others						
4.	Initiates greetings						
5.	Maintains closeness when interacting with peers						
6.	Interacts in a group						
7.	Speaks with appropriate volume						
8.	Maintains eye contact during conversation						
9.	Recognizes the facial expression and body language of others						
10.	Responds slowly in conversations						
	II. INVOLVING IN GROUP ACTIVITY AND PLAY						
11.	Join in activities with peers						
12.	Takes turns during games and activities						

13.	Allows others to assist him or her task						
14.	Responds to the conversation during play						
15.	Responds to the invitations of peers to join them in activity						
	III.TURN TAKING						
16.	Maintain the give and take of conversations						
17.	Verbally express how he/she is feeling						
18.	Responds to the questions directed at him /her by others						
19.	Joins a conversation with two or more people without interrupting						
20.	Engages in one -to-one social interactions with peers						
Total score		**20**					

MODIFIED AUTISM SOCIAL SKILLS PROFILE

1 - YES
0 – NO

Total score = 20

SCORE INTERPRETATION

PERCENTAGE	SOCIAL SKILLS
76 -100 %	Above Average social skills
51-75 %	Average social skills
Below 50 %	Below average social skills

APPENDIX – A

K.G. COLLEGE OF NURSING

(Affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai)
K.G. Hospital and Post Graduate Medical Institute
Arts College Road, Coimbatore - 641 018, India
Tel : (0422)-2212121, 2219191, 2222222 Fax : (0422)-2211212
E-mail : drgb@kggroup.com, Web : www.kghospital.org

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

To

The Director
ADITI –A Centre For Developmental Disorders
Ramalinga Nagar
K.K.Pudur
Coimbatore.38

Respected Madam/Sir,

Sub: Requisition for permission to conduct the study.

This is to bring your kind notice that **Mrs. Jayanthi Ruba. Y** M.Sc. (N) II year student of K.G College of Nursing is conducting a research on the topic **"A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-MODELING ON SOCIAL SKILLS AMONG CHILDREN WITH AUTISM IN SELECTED SCHOOLS, COIMBATORE".,** for the purpose of submission to the Tamilnadu Dr. M.G.R. Medical University, Chennai, as a partial fulfillment for the requirement for the award of M.Sc. Nursing Degree.

I Kindly request you to grant her permission to conduct this study in your school for a period of five weeks. Further details of the proposed project, if required will be furnished by the student personally.

Kindly do the needful.

Thanking you,

Yours truly,

ADITI - A CENTRE
For DEVELOPMENTAL DISORDERS
36-A, Ramalinga Nagar, 3rd Cross
K.K. Pudur, Coimbatore - 641 038

Permitted to conduct her study.

Prof. Sonia Das
PRINCIPAL

PRINCIPAL
K.G. COLLEGE OF NURSING
K.G. HOSPITAL
ARTS COLLEGE ROAD
COIMBATORE - 641 018.

KAUMARAM
PRASHANTHI ACADEMY
(Run by Kaumaram Prashanthi Trust)

04-01-17

To :

The Principal

K.G. College of Nursing,

Arts college road,

Coimbatore – 641018.

Dear Sir/Madam,

Sub : Permission for project work.

With reference to your letter, the management is pleased to grant permission to Ms. Jayanthi Ruba Y. Msc (N) II year student to undergo research study titled "A study to assess the effectiveness video-modeling on social skills among children with Autism in selected schools, Coimbatore" in our institution for a period of five weeks.

Director

Mrs. Deepa Mohanraj M.Sc Psy
Kaumaram Prashanthi Academy
239/2, Chinnavedamppati PO
Saravanampatti Village
Coimbatore - 641 049

K.G. COLLEGE OF NURSING

(Affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai)
K.G. Hospital and Post Graduate Medical Institute
Arts College Road, Coimbatore - 641 018, India
Tel : (0422)-2212121, 2219191, 2222222 Fax : (0422)-2211212
E-mail : drgb@kggroup.com, Web : www.kghospital.org

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

To

The Principal
Star Special School
St .Joseph Church
Ondipudur
Coimbatore.

Respected Madam/Sir,

Sub: Requisition for permission to conduct the study.

This is to bring your kind notice that **Mrs. Jayanthi Ruba. Y** M.Sc. (N) II year student of K.G College of Nursing is conducting a research on the topic **"A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-MODELING ON SOCIAL SKILLS AMONG CHILDREN WITH AUTISM IN SELECTED SCHOOLS, COIMBATORE".,** for the purpose of submission to the Tamilnadu Dr. M.G.R. Medical University, Chennai, as a partial fulfillment for the requirement for the award of M.Sc. Nursing Degree.

I Kindly request you to grant her permission to conduct this study in your school for a period of five weeks. Further details of the proposed project, if required will be furnished by the student personally.

Kindly do the needful.

Thanking you,

Yours truly,

PRINCIPAL
"STAR"
St. Anne's Rehabilitation Centre
S.NGANALLUR,
COIMBATORE - 641 005

Prof. Sonia Das
PRINCIPAL

PRINCIPAL
K.G. COLLEGE OF NURSING
K.G. HOSPITAL
ARTS COLLEGE ROAD
COIMBATORE - 641 018.

K.G. COLLEGE OF NURSING

(Affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai)
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E-mail : drgb@kggroup.com, Web : www.kghospital.org

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

To

The Director,
Special school for Autism,
Trichy Road, Ramanathapuram,
Coimbatore.

Respected Madam/Sir,

Sub: Requisition for permission to conduct the study.

This is to bring your kind notice that **Mrs. Jayanthi Ruba. Y** M.Sc. (N) II year student of K.G College of Nursing is conducting a research on the topic **"A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-MODELING ON SOCIAL SKILLS AMONG CHILDREN WITH AUTISM IN SELECTED SCHOOLS, COIMBATORE".,** for the purpose of submission to the Tamilnadu Dr. M.G.R. Medical University, Chennai, as a partial fulfillment for the requirement for the award of M.Sc. Nursing Degree.

I Kindly request you to grant her permission to conduct this study in your school. Further details of the proposed project, if required will be furnished by the student personally.
Kindly do the needful.

Thanking you,

Karthik Rajaram,
Director - Rehab Program,

Yours truly,

Prof. Sonia Das
PRINCIPAL

PRINCIPAL
K.G. COLLEGE OF NURSING
K.G. HOSPITAL
ARTS COLLEGE ROAD
COIMBATORE - 641 018.

STEPS REHABILITATION CENTRE
UNIT II
1850, Trichy Road,
Ramanathapuram,
Coimbatore
INDIA - 641 045.
+91 9894747660
(A UNIT OF STEPS GROUPS)

Approved to Conduct Study

APPENDIX – B

K.G. COLLEGE OF NURSING

(Affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai)
K.G. Hospital and Post Graduate Medical Institute
Arts College Road, Coimbatore - 641 018, India
Tel : (0422)-2212121, 2219191, 2222222 Fax : (0422)-2211212
E-mail : drgb@kggroup.com, Web : www.kghospital.org

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY OF THE TOOL

From,

Mrs.Jayanthi Ruba.Y
II Year M.Sc. Nursing,
K.G. College of Nursing,
Coimbatore.

To,

Mrs.Shanthi M.sc (N)
Vice Principal
GKNM Institute of Nursing,
Coimbatore

Through The Principal of K.G. College of Nursing

PRINCIPAL
K. G. COLLEGE OF NURSING
K G HOSPITAL
ARTS COLLEGE ROAD,
COIMBATORE -641 018.

Respected Madam/Sir,

Sub: Requisition for expert opinion and suggestions for content validity of the tool.

I am a student of M.Sc. Nursing II year, in K.G College of Nursing, Coimbatore, affiliated to The Tamilnadu Dr. M.G.R. Medical University, Chennai, as a partial fulfillment of M.Sc. Nursing Programme, I am conducting a study on **"A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-MODELING ON SOCIAL SKILLS AMONG CHILDREN WITH AUTISM IN SELECTED SCHOOLS, COIMBATORE".**

Here with I am sending the developed tool for content validity and for your expert opinion and possible suggestions. I will be very kind of you to return the same to the undersigned at the earliest possible.

Thanking you,

Date:
Place: Coimbatore

Yours faithfully
(Mrs.Jayanthi Ruba.Y)

ASSESSING SOCIAL SKILLS OF THE CHILDREN WITH AUTISM

PROVIDING VIDEO-MODELING FOR THE CHILDREN WITH AUTISM